JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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EARLY VICTORIAN ARCHITECTS AND ENGINEERS

Top row, left to right: A. N. W. Pugin, Joseph Paxton, J. B. Papworth. Middle row: Thomas Telford, C. R. Cockerell, John Rennie. Bottom row: John Foulston, Decimus Burton, David Brandon

JOURNAL OF THE
ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 44. 3RD SERIES 11 SEPTEMBER 1937 No. 19

Journal

MR. JOHN RUSSELL POPE

We regret to record the death of Mr. John Russell Pope, the distinguished American architect and R.I.B.A. Hon. Corresponding Member. Mr. Pope had a long and distinguished career of work which included in this country additions to the British Museum and Tate Gallery. An account of his life and career will be published in the next number of the JOURNAL.

FORTHCOMING "MODERN SCHOOLS" EXHIBITION

The R.I.B.A. Exhibition Sub-Committee's next exhibition is entitled "Modern Schools," and will be opened by Professor John Hilton on Tuesday, 12 October, at 3 p.m. The purpose of the exhibition is to show education authorities, educationists and the general public the newest ideas in the planning, equipment and design of school buildings. It will, incidentally, be of considerable interest to architects, because it is a new collection of photographs of the best schools in the principal countries of the world. The exhibition has received the approval and assistance of H.M. Board of Education, and its principal basis as regards elementary schools is the Board's recent Educational Pamphlet No. 107. In view of the Government's new drive to bring the State schools of the country up to date, the Committee are to be congratulated on their timely organisation of this show. Preliminary announcements have aroused such a degree of interest that the provincial tour is already booked for eighteen months. The Committee, feeling that the new trend in school design, as indicated by Pamphlet No. 107, needs amplification and discussion by architects, have asked Mr. H. W. Burchett [A.], who is Chief Assistant for Schools of the Middlesex County Council, to give an informal talk on the Planning of Schools on Thursday, 14 October, at 6.30 p.m. For architects and students interested in school design this is an opportunity which should not be missed of hearing an acknowledged expert on the subject. The exhibition will remain open until Tuesday, 19 October.

C.P.R.E. ANNUAL CONFERENCE

The tenth annual conference of the Council for the Preservation of Rural England is to be held at Leamington from 14 to 17 October. Three papers are to be read, by Professor Abercrombie on *Green Belts*, by Mr. G. Langley Taylor on *Rural Housing: Some of its Problems*, and by Professor G. M. Trevelyan on *National Parks*. An attractive series of tours has also been arranged to places of interest in the neighbourhood, including Bournville, Compton Wynyates, Stow-on-the-Wold, Stratford-upon-Avon, Warwick and Kenilworth. The conference is not confined to members of the C.P.R.E.; individuals interested in the work of the C.P.R.E. or in the subjects to be discussed at the conference will be welcomed. The conference fee is 5s., and full particulars and forms can be obtained from the Secretary of the C.P.R.E., Mr. H. G. Griffin, 4 Hobart Place, S.W.1.

D.I.A. WEEK-END CONFERENCE

Another conference, that of the Design and Industries Association, is to be held at Bexhill from 24 to 26 September. Meetings are to be held in the De La Warr Pavilion, and nine short papers are to be read. These are as follows: On Friday evening, Professor Herbert Read on *Design as a Social Factor*, Mr. Anthony Bertram on *Design as Common Sense*, Mr. Louis Otto on *Design as Good Business*. On Saturday morning, Mr. J. E. Barton, M.A., on *The Enjoyment of Design at School*, Mr. E. M. O'R. Dickey, M.A., on *Training To-morrow's Designers*, Mr. John De La Valette on *What the Royal Society of Arts is Doing*, Mr. Frank Murphy on *Giving the Public What it Needs*. On Saturday evening, Mr. F. R. Yerbury on *Development of the House and Flat*, Mr. E. Maxwell Fry on *Development of the City*. Sunday afternoon will be devoted to a discussion on future D.I.A. policy. Membership of the conference is open to all. The registration fee is 15s. Single sessions are 5s.

R.I.B.A. LIBRARY CATALOGUE

On another page will be found a description of the great R.I.B.A. library catalogue which is to be published in November as the result of a generous gift from Sir Banister Fletcher. A catalogue such as this is an essential element in the machinery of a great library to enable would-be users to have always by them a record, complete up to a certain date, of the books at their disposal. No catalogue of a living library, as everyone knows and many people say, can be "com-

plete." The measure of the library's vitality is perhaps the rapidity with which its catalogue gets out of date, but with the catalogue and the current JOURNAL accession lists anyone can know what the library has in it at any moment; without the catalogue the student can at the best only know of the latest and perhaps least essential books, for few studies, not even those of the most modern subjects, are concerned solely with contemporary literature. Because of Sir Banister's gift, and because the Literature Committee were wise enough to foresee the possibility of publication when library reorganisation started many years ago, it has been possible to sell the catalogue at a price which is probably a tenth of the cost of production and so to bring it within the means, it is hoped, of every library and private student. When order forms are issued with the next and subsequent JOURNALS it can be hoped and even expected that this great and creative venture will meet with the response it deserves.

SPECIAL AREAS AND NATIONAL PLANNING

Some weeks ago, at the request of Sir George Gillett, a conference was held between representatives of the R.I.B.A. and officers of the Special Areas Commission. The Special Areas Commissioner had arranged the meeting in order to see what assistance the R.I.B.A. might give in drawing attention to the facilities now being offered in the national trading estates. Architects and town planners who want information about these facilities should communicate with the secretary of the R.I.B.A. Public Relations Committee.

This whole matter of trading estates and the development of the depressed areas is intimately connected with the question of the location of industry, not merely in the depressed areas but as an essential part of the largest conception of national planning. This was referred to by Mr. Percy Thomas in his presidential address last year. The appointment of the Royal Commission on the Location of Industry, to which Professor Patrick Abercrombie has been appointed a member, is a welcome sign at least that the necessity of large-scale planning is being realised.

MR. A. R. L. WRIGHT

The Royal Institute of Architects of Western Australia recently paid a charming compliment to one of their oldest members, Mr. A. R. L. Wright [*F.*], on his seventy-sixth birthday. It was mainly owing to Mr. Wright's efforts that the statutory registration of architects was brought about in Western Australia in 1921, and he has been chairman of the Architects' Board which has administered the Act since that date. On 28 June last, Mr. Wright was the guest of honour at a complimentary dinner held at Perth, when his fellow architects offered him their thanks and congratulations, and presented him with an inscribed silver rose bowl. Mr. Wright has been President of the Institute of Western Australia on several occasions, and is Deputy Hon. Secretary R.I.B.A. for Western Australia. Members in Great Britain will join with us in offering our congratulations to Mr. Wright, both on his birthday and on the successful establishment of full statutory registration—a matter that is to-day of great moment to us in this country.

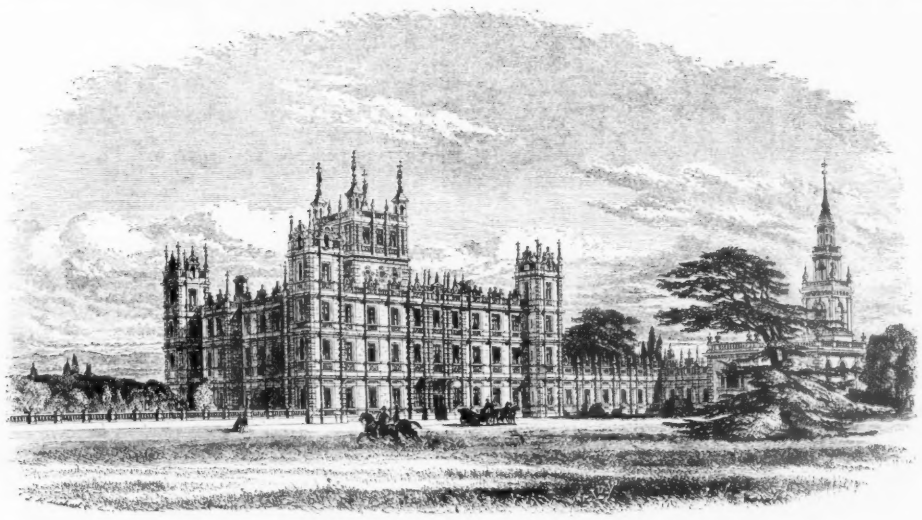
THE PRESIDENT'S ENGAGEMENTS

Members may remember how, in his inaugural address last year, Mr. Percy Thomas referred to the enormous number of engagements he had fulfilled as R.I.B.A. President. He had visited nineteen allied societies, eaten forty-nine public dinners, and made forty-six public speeches (a gap of three which the Vice-Chancellor of Oxford deplored).

This year Mr. Thomas received 160 invitations to public functions, of which he personally attended twenty-seven, he was represented by Mr. Hamp at fifteen, by Mr. Stanley Hall at twelve, Mr. Holden at two, and Mr. Tatchell and Mr. S. Port at one each. Mr. Thomas also attended 29 out of 31 allied societies' dinners; received 83 applications for the nomination of arbitrators, and 51 applications for the nomination of assessors; and made 65 miscellaneous appointments.

SHIP ARCHITECTURE

Two years ago we were invited to attend the Press cruise from Tilbury to Southampton of the new Orient liner *Orion* in which the interior decoration work was designed by Mr. E. B. O'Rorke [*A.*]. So much were we impressed by Mr. O'Rorke's work (not to mention the hospitality of the managing firm, Messrs. Anderson, Green & Co.) that it was with great pleasure we recently accepted another invitation for a similar trip in the new sister ship *Orcades*. A feature of Mr. O'Rorke's work in *Orion* was that he entirely departed from the tradition of disguising the ship interiors with architectural detail borrowed from land sources. Instead he emphasised the essential forms and lines of the structure with interesting decorative materials, used with great charm and taste. Architects will be pleased that so commonsense a policy has been endorsed by the Orient Line and their travelling public, for *Orcades* shows it exemplified still further. In this new ship Mr. O'Rorke's work has a quiet charm of manner and a quality of "rightness" that makes the flamboyant period disguises of some larger (and more expensive) ships look rather silly. It is also noteworthy that the owners have had the good sense to place the whole of the passenger accommodation and equipment, down to the smallest details, under the control of their architect. Mr. O'Rorke has also recently been responsible for the interior decoration of the Empire Flying Boats now being used on the experimental Atlantic Service.



Highclere, altered by Charles Barry, 1837

EARLY VICTORIAN ARCHITECTURE 1837-51*

By HENRY-RUSSELL HITCHCOCK

BREAKDOWN OF THE CLASSICAL DISCIPLINE

The accession of Queen Victoria happens to coincide with a definite break in the development of English architecture—not that the death of William IV was an event of any architectural significance, but in the same year, 1837, came the death of Sir John Soane, certainly the greatest English architect of his age, and perhaps the greatest of all English architects; and with the death of Soane there came an end to the attempt, which was perhaps not altogether conscious, even with him, to develop a modern architecture based essentially on the rationalisation of classical forms. Of course, architecture based upon classical forms did not die out, but the impetus of stylistic development passed, on the whole, into other lines. The beginning of the breakdown of the classical discipline can be seen in Wilkins's (1778-1839) National Gallery, (1827-38), where the form is arbitrarily varied by projecting porticoes and, above all, by a skyline of distinctly picturesque character.

In Scotland the true Classical Revival retained more vitality, as another building, completed at just the time of Victoria's accession, illustrates. Playfair's (1789-1857) Royal Institution, Edinburgh (1822-36) is a building of massive dignity and considerable interest of detail; but for the present purpose it is perhaps more interesting to observe that the rather papery Gothic Free Church College, which appears above the Royal Institution on axis with it, is also a work of Playfair's, done slightly later; and, indeed, although the Edinburgh classicists continued to work, in a solid and dignified vein, well into the middle of the century, Playfair and his contemporaries were equally busy with Tudor and other more or less mediaeval revivals.

The extent to which taste changed in the early years of Victoria's reign is perhaps symbolically illustrated by the situation at Buckingham Palace. Buckingham Palace was, of course, a production of the great Regency architect, Nash, completed by Blore during the reign of William IV. Victoria was the first sovereign to reside in Buckingham Palace, and within ten years of her accession she had Blore build a new east front, effectively masking the Regency buildings behind, and in its stuffy, complicated Italianate style completely different from the Nash palace. It would be absurd to claim that this wing was built just to hide a monument too completely characteristic of the preceding period when it was undoubtedly needed for practical reasons, but it does cut off effectively the Regency work which, in the last few years, has seemed to developing modern taste rather admirable.

* A Lecture delivered at Dartington Hall, Totnes, Devon, on 8 July 1937.

The Houses of Parliament, by Charles Barry [*Aerofilms*

THE HOUSES OF PARLIAMENT

However, the architectural work which really signalised the opening of a new period was the rebuilding of the Houses of Parliament. The Houses of Parliament had burned in 1834, and in 1835 a competition was held with the specific requirement that the design should be Gothic or Elizabethan. This indicated that the Gothic Revival, whose roots go back about 100 years, had come of age, and that for nationalistic reasons mediaeval, or at least pre-academic, forms were to be preferred for the great symbol of the national government. Among the architects in the competition, Cockerell, who was destined to be the last great Classical Revival architect of England, attempted, through a sophistry, to fulfil the terms of the competition and yet to work in an Academic vein, claiming that Italian forms of the Elizabethan period were more suitable for such a monument than the hybrid forms of English architecture at the end of the sixteenth century. His design, however, was conspicuously uninteresting. Salvin (1799-1881), already started on his busy career as a country house architect, and Rhind, an Edinburgh classicist, were quite literal in their imitation of early English Renaissance forms. Buckler, one of the more scholarly Early Gothic revivalists, won a second prize with a plausible but not very interesting Gothic design, and Charles Barry, already conspicuous as one of the ablest architects of the younger generation, of course, won the competition in 1836 with the project which was executed.

Barry (1795-1860), first appears on the architectural scene in 1824 with the design of the Manchester Athenaeum, an excellent Grecian building completely characteristic of its period, but he made his name with the sponsorship of Italian High Renaissance forms as an alternative to the Greek Revival in the next few years, when taste throughout the world was turning from the severity and stringency of the classical discipline. The Travellers' Club (1829-32) was his first work in the astylar Italian palace vein, corresponding in date rather closely with comparable French and German developments, such as Von Klenze's Aeltere Pinakothek in Munich. In 1836 he had begun a much larger club building, the Reform, in a more pompous version of Italian Renaissance palace style, but Barry was from the beginning an eclectic, and had built several Commissioners' churches in Gothic form, none of particular interest, and in Birmingham in 1833 he had begun the King Edward's Grammar School in Tudor Gothic style.

In working out the King Edward's Grammar School he had employed a very brilliant young draughtsman, A. N. W. Pugin (1812-52), who was, with Barry, perhaps the most conspicuous architectural figure of the early Victorian age. Pugin, the son of an *emigré* who had given some assistance in Gothic detail to Nash, was a most precocious young man. He had been employed, as early as 1831, in designing Gothic furniture for Windsor Castle, and was already an amazingly prolific recorder and inventor of mediaeval detail: so that when Barry prepared his Tudor designs for the Houses of Parliament he naturally called upon Pugin for the detailing, and thus most of what we see on the surfaces of the Houses of Parliament is Pugin's work. It was rather unfortunate for Barry that during the very years when the Houses of Parliament were being started Pugin, from a relatively unknown man, developed into one of the most conspicuous architectural figures in England.

Pugin had been converted to Catholicism in 1834, which was destined to hamper his career in certain respects, but perhaps at the beginning it was of assistance, since it made him the obvious architect for many of the new Roman Catholic churches that were built in the late 'thirties and early 'forties. But perhaps even more than his actual buildings, which were not very large and which were not at all satisfactory to the standards of mediaeval revival which he set himself, it

was the controversial writing he was doing which made him so obviously the standard-bearer of a wholly new type of Gothic revivalism than that which had come through from the eighteenth century. His "Contrasts," published in 1836, was a most stimulating attack on the then existent Regency vernacular in comparison to mediaeval architecture. Its success required a second edition in 1841. His "True Principles," first published in 1841 and again in 1853, was an even more reasoned argument for the consistent re-adoption of Gothic forms. His "Apology," of 1843, republished in 1853, renewed the attack; and his "The Present State of Ecclesiastical Architecture," also of 1843, presented in his very effective draughtsmanship the results thus far obtained.

The fact that Pugin appeared by the middle of the century as a far more significant figure than Barry led to violent controversy as to who was the responsible architect of the Houses of Parliament. Pugin's son published in 1867 a pamphlet called "Who was the Art-Architect of the Houses of Parliament?" to which Barry's son replied. These controversies are so couched in mid-nineteenth-century terms and ideas that they are rather meaningless to us, though frequently entertaining. The truth of the matter is generally recognised to-day—that the building, as concerns its truly architectural aspects, (i.e., its general plan, which is symmetrical and within the Academic tradition) and also as regards its general façade composition, is certainly the work of Barry, but that the detailing in the widest possible sense is almost completely Pugin, and that had there been a proper partnership between the two men there need never have arisen the controversy of which I have spoken.

When one looks at Westminster from the air one sees clearly that, except for Westminster Hall, an actual mediaeval building which had not burned, and which the terms of the competition required to be combined with the new building, the general layout is fully Academic, with a logical bi-symmetrical separation of parts based upon the equal importance of the two Houses, sub-divided into a grid with many interior light courts, and surrounded by a façade which is, to anyone who knows the work of Barry, very characteristically Barryesque in its general scheme, notably because of the emphasis upon the ends by means of towers rather than upon the centre. Of course, the two tall towers, the Victoria Tower and the Clock Tower, do not match, but they are rarely seen together, and they are the least concession that Barry could make to mediaeval picturesqueness. The façade from the river has a central portion flanked by towers which is nearly identical with the composition of Barry's Highclere, done in Jacobean style in 1837, and also very like his Treasury building in Whitehall of 1844, where again the ends are emphasised by towers, and, of course, taking the whole façade, we find again an emphasis by means of double towered pavilions at the far ends. The execution of the Houses of Parliament filled the years from 1844 on

Belgrave Square, by Basevi. 1822-44 [*From an engraving by Thomas Shepherd in Elmes' Metropolitan Improvements*

into the 'fifties, during which time Pugin was continuously at work designing all sorts of detail down to wallpapers and inkwells until his premature death in 1852.

When one examines a portion of the wall surface of the Houses of Parliament one realises that the Gothic style permitted the use of many more windows than could have been conveniently included in a conventional Classical or Renaissance design, and that the continuous web of Tudor detail is of significance not for its considerable archaeological plausibility (resembling, for example, the panelled surfaces of the Henry VIII Chapel across the road) but for the veil of small-scaled units which it throws over the whole enormous pile. In other words, it is not, probably, the quality of Pugin's mediaevalism that gives the building its distinction, but rather Barry's imagination in thus masking the whole pile with this continuous web of lacy, more or less equalised, units. In a brilliant, sunny climate the detail would be

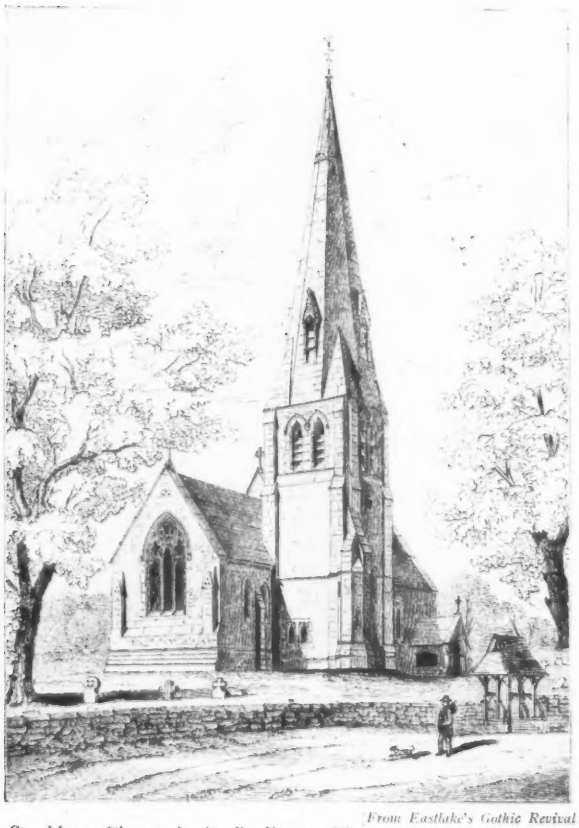
[From Pugin's Present State of Ecclesiastical Architecture in England

St. Barnabas, Nottingham, by A. N. W. Pugin

distracting, but in the climate which could be counted upon here in London by the side of the river the form is merely swathed in this veil of Gothic detail. It is perhaps worth pointing out that the most effective paintings of the Houses of Parliament are those by Monet, in which the form is still further disintegrated by atmospheric effect.

PUGIN'S CRUSADE

Pugin's earliest churches were in Perpendicular style like the Perpendicular detail used on the Houses of Parliament. A characteristic example is St. Marie's, Derby (1838-39). But almost immediately Pugin turned from the Perpendicular, considering that it represented a decadent period of the Gothic, and preferring the earlier Gothic of the fourteenth century. The frontispiece of "The Present State of Ecclesiastical Architecture," which shows all the Pugin churches built or in construction in 1843, is an impressive demonstration of the bulk of his production and of the extent to which the basic ideals of the Gothic Revival, derived in the main from English fourteenth-century precedent, were stabilised within these few years by Pugin. Alas, Pugin's architecture is almost unphotographed and extremely difficult to photograph, and his art is usually displayed in modern times through his drawings. These drawings have great delicacy and charm, but they do not clearly express the very real and not necessarily "revived" qualities which his architecture had at its best—a sense of simple, clearly outlined forms, volume-like rather than mass-like, a preference for all-over detail which emphasises surface, and a certain neatness and precision of workmanship which is not



[From Eastlake's Gothic Revival

St. Mary, Chetwynde, by B. Ferry, 1865

particularly mediaeval, but rather appropriately nineteenth century in the best sense.

In addition to churches, Pugin built many monasteries, convents and schools, and a few private houses. Having very little money to spend, these are in the main rather disappointing, and one turns with a certain interest to those few examples where Pugin was not handicapped economically. For example, the restoration of Alton Castle, a real mediaeval building, is one of the most effective pieces of nineteenth-century mediaeval restoration, partly, it must be admitted, because of the extremely dramatic site. But here the aspects of Pugin's archaeological correctness and the aspects of his own sense of volume and precision of outline are most agreeably combined.

Among Pugin's churches, one of the most effective to-day is St. Barnabas, the Roman Catholic cathedral in Nottingham (1842-44). Here the group of chapels at the rear, leading up to the central tower, form a most interesting composition with the harmonious variety of shape which was now desired in opposition to the unified masses of the Greek Revival. The interior originally, as we can see from Pugin's drawings, was covered with rich, small-scale ornament, now, alas, painted out. The most expensive job that it was Pugin's luck to obtain was the construction of St. Giles's, Cheadle, not perhaps from the exterior very interesting, but extraordinarily rich in its varied, diapered surfaces inside. Here the tower was on axis at the west end, but another type, such as St. Mary, Stockton-on-Tees (1842), was more influential, with the tower, as so often in English parish churches, at one corner.

In Pugin's own house at Ramsgate he developed on a moderate scale the revived manor house style, not perhaps altogether effectively because of the unfortunate materials, but in the contiguous church, which he built for himself, he achieved his highest standard of archaeological plausibility, making use of the characteristic local material, napped flint. St. Augustine's, however, lacks the personal composition of such a church as St. Barnabas, Nottingham.

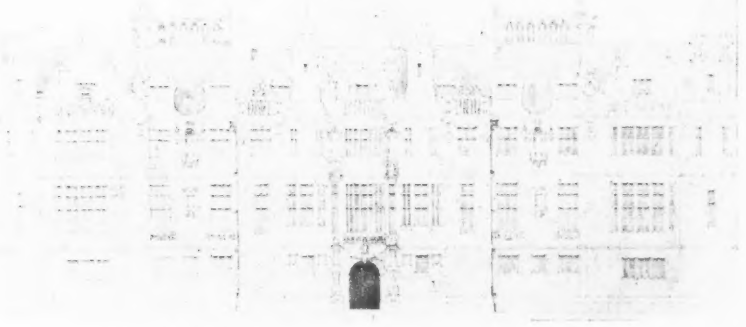
Although Pugin built little but ecclesiastical, educational and domestic architecture, his books include projects for engineering works, city row houses and even shop buildings which are of very great interest and considerable ingenuity, much better, indeed, than men of the next generations following in his place were able to accomplish with Gothic forms.

The death of Pugin in 1852 in full production was certainly a crucial event, for it coincided with the moment in which the Gothic Revival took a very different turn. Whether at this point, when the standard of archaeological accuracy which he had established was being maintained by a considerable group of architects, and was beginning in its turn to seem a little boring, as the Greek Revival had done before, his continued life and activity would have given a different turn than took place to the Gothic Revival is, of course, outside the possibility of an intelligent guess, but certainly his death marks a date, as did Soane's.

In the 'forties vast numbers of young architects were busy learning the Gothic Revival from Pugin's books and works, and although they did not all learn it very successfully, he became undoubtedly the essential leader in those fields of architecture in which he worked.

There was another aspect of the early Victorian Gothic Revival, more conspicuous in other countries, which barely had a chance in England, but which is represented by the Scott Monument by Kemp in Edinburgh, built 1840-44. This more opulent, more flowing, almost more baroque sort of form, in which the ornament is plastic rather than of the surface, led to very interesting things in America; but the Scott Monument was unique in Great Britain, and Kemp died just as it was completed.

The next decades continue to illustrate, in the works of various architects, the continuance of the fourteenth-century discipline initiated by Pugin. Lancing College, Sussex, begun in 1854 by R. C. Carpenter, is an example of a large educational institution in the vein which Pugin had initiated on a small scale in his schools



Harlaxton Manor, by Anthony Salvin, 1837

and convents. St. Mary's, Chetwynde, Shropshire, by Ferry, Pugin's biographer and most devoted pupil, of 1865, is an excellent and characteristic example of the sort of the country church, based on fourteenth-century English parish church models, which was perhaps the most consistent heritage of Pugin among the architects of both England and America.

It is arbitrary to fix upon any one monument as representing the high point of the archaeological aspect of the Gothic Revival as represented by Pugin, but the Holy Catholic and Apostolic Church, Gordon Square, by Brandon, of 1851-55, being the work of a man known above all for his publications on the Gothic, seems to indicate the kind of mechanical accuracy without personal quality which was the standard of the mid-century, and against which a reaction set in even before Pugin's death.

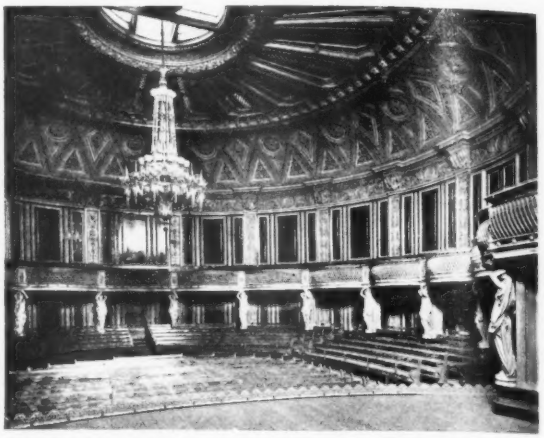
COUNTRY HOUSE PICTURESQUENESS

In country house architecture the Gothic Revival was not as yet established. Indeed, the fake castles of the early nineteenth century, with their picturesque and quite irrelevant mediaevalism, now passed out of fashion, and such busy country house architects as Salvin and Burn (1789-1870) worked more generally in the Elizabethan or Jacobean vein. Characteristic of the rather frenzied picturesqueness, and at the same time considerable plausibility, of this sort of thing is Salvin's Harlaxton Manor of 1837. Burn, on the whole, produced more frankly modern mansions upon which the Jacobean detail was sprayed in a rather arbitrary way.

This Jacobean Revival—for it is to all intents and purposes that—did not have the literary support that the Greek Revival had once had, and that the Gothic Revival now had, but it represented an important part of the production of the early Victorian age, and even more than the Greek Revival and the Gothic Revival this imitation of hybrid styles broke down the nineteenth-century sense of form and encouraged a preference for exuberance at the expense of purity. For it is desirable, in spite of the tendency to see this period as one in which a conscious Gothic Revival overwhelmed a previously dominant Classical Revival, to realise that actually there were general æsthetic currents which can be illustrated quite as well by the later Classical Revival monuments as by the developing Gothic monuments. The preference for broken as opposed to unified mass I have already spoken of in the case of Wilkins's National Gallery, and the tendency toward richer and less grandiose proportions and detail, evident in Barry's work as soon as he turned to High Renaissance palace forms.

THE CLASSICAL REVIVAL CONTINUED

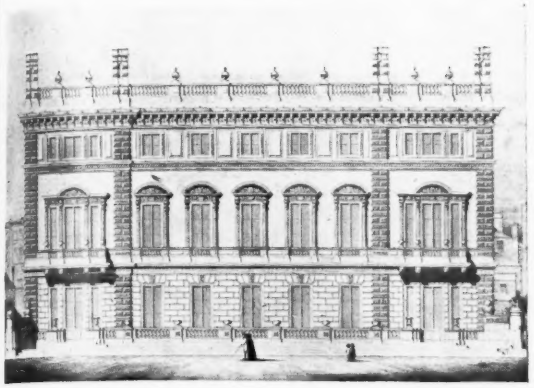
But the Classical Revival did not die easily. Basevi's (1794-1845) Fitzwilliam Museum, Cambridge, begun in 1837, is still a monumental Classical building, but



St. George's Hall, Liverpool: The Circular Concert Room. by H. L. Elmes and C. R. Cockerell. 1841-1854

the detail is now Roman-Corinthian rather than Greek, and the curious corner projections succeed quite in destroying the essential cube of the mass. To modern taste, Basevi's work for the Grosvenor Estate at Belgrave Square, 1822-44, is more appealing with its continuation into the early Victorian age of the standards of Regency row house architecture: and finer, perhaps, than Belgrave Square, which has something of the pomposity of Nash's terraces, are such simpler works of the period, perhaps also by Basevi, as Pelham Crescent in South Kensington, where the scale is domestic and the painted stucco surfaces barely broken except by extremely simple and refined detail.

In the more monumental domestic vein of this period are such groups of houses as Southwick Crescent, in Bayswater, now unfortunately destroyed; but in the main the finest house architecture of this period is the simplest, and only occasionally, as in some houses in Westbourne Grove, Paddington, of about 1845, do we find a combination of the simplicity of the preceding age with the slightly richer form and more varied inspiration of detail that is characteristic of the more advanced monumental architecture of the time. In the provinces the early Victorian domestic architecture grows out of the Regency tradition very directly and naturally, although in the work of Foulston and Wightwick at Plymouth, and that of Papworth at Cheltenham, and that of Burton at Tunbridge Wells, we find, as the 'forties progress, more and more detail of more and more eclectic inspiration. On the whole, the quality of early Victorian housing developments is remarkably high, and in such a region as the Ladbroke Grove Estate, a combination of straight streets and curved crescents, the relation of the houses to the open squares and parks represents an imaginative develop-



Bridgewater House, by Charles Barry, 1857

ment over the standards of the eighteenth and early nineteenth centuries—an imaginative development of particular inspiration to us in the mid-twentieth century, which, alas, was interrupted by the picturesque garden suburbs of the later nineteenth century.

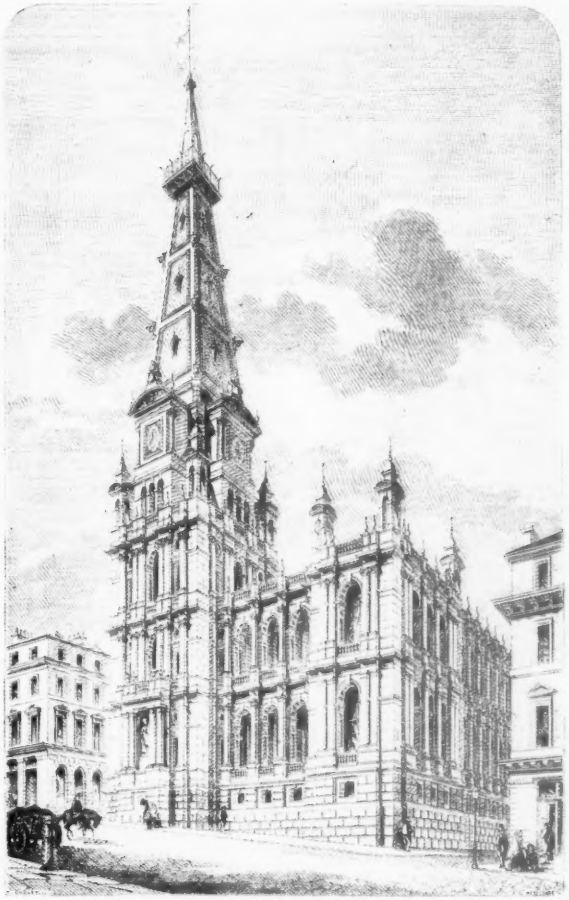
The most impressive and undoubtedly the finest late Classical Revival public monument in England was St. George's Hall, Liverpool, begun by Elmes in 1839. This seems to show some influence from the work of the great German Classical revivalist Schinkel, whose work Elmes had studied on a European trip, and because of its very large size it was possible to elaborate the mass, as Basevi had done at the Fitzwilliam Museum, without loss of nobility and dignity of scale. The talented Elmes died in 1847 before St. George's Hall was completed. The work was finished by Cockerell (1788-1863), who is responsible for the exquisite circular concert hall, with its delicate detail, which is no longer Classical but almost eighteenth century in inspiration.

Cockerell, however, the last of the Classical revivalists, is more characteristically represented by such powerful compositions as the branch Banks of England in Liverpool and Manchester and Bristol, where his remarkably scholarly command of Greek architecture is none the less varied with certain details of Italianate inspiration. Cockerell enriched the compositions of the Greek Revival without losing the sense of discipline, the sense of solid unity of mass, which had been its great virtue; but he remains somewhat exceptional in an age which demanded more highly spiced architectural fare, and after him the Classical Revival practically passed out of existence.

BARRY'S ECLECTICISM IN ENGLAND

For in so far as the Gothic Revival had not yet preempted all fields of construction, it was the eclecticism of Barry which led the way—Barry, who pushed his High Renaissance palace style to its richest form in Bridgewater House, of 1857, but who was also building in the 'thirties and 'forties and 'fifties in various other styles; for example, the Treasury in Whitehall is almost academically Classical, while Walton-on-Thames represents what in America we call the Italian Villa style—that is to say, an Italianate composition asymmetrical in mass, and dominated by a loggia-topped tower. Yet Dunrobbin Castle and Canford Manor, of 1844 and 1848 respectively, were mediaeval in the tradition of the early fake castles, while Highclere, which has already been mentioned, was Jacobean, and Cliefden really Palladian.

Finally, in the 'fifties, in the competition for the concentration scheme for the Government offices in Whitehall, we find Barry offering a composition based



[*The Builder*

Proposed Town Hall, Halifax, by Charles Barry

Great Western Terrace, Glasgow, by Alexander ("Greek") Thomson [*Architect and Building News*

upon the new Louvre and the Tuileries, with pavilions and high French roofs and square domes. This style is essentially also that of his last building, the Halifax Town Hall, completed after his death in 1862 by his son, E. M. Barry. Pugin had provided the theme of a new architectural crusade for reviving the national Mediaeval style, instead of the style of ancient Greece, but Barry provided the alternative concept of Academic eclecticism, working, as we have seen, freely and with almost equal competence in a variety of styles.

A few examples of work in the Barryesque veins are of particular importance. Vulliamy's (1790-1871) Dorchester House, even richer in its use of Italian Palace forms then Bridgewater House, Pennethorne's (1801-71) Duchy of Cornwall Offices (1854), and, for its influence upon residence architecture of the mid-century remarkably significant, Osborne House, of 1844-46, by Prince Albert and Thomas Cubitt. Osborne House is, of course, an example of the Italian Villa type which Barry had illustrated at its highest quality at Walton-on-Thames, and although Osborne House itself is not a very handsome building, the combination of a certain Renaissance discipline of detail with the advantages of asymmetrical composition as regards free planning makes of the Italian Villa style one of the more successful types of the mid-century.

"GREEK" THOMSON IN SCOTLAND

In Scotland, as I have already said, the Classical Revival retained more vitality than in England, and in Glasgow a very remarkable man, "Greek" Thomson (1817-75) continued through the mid-century to develop the Greek Revival along lines sympathetic to the taste of the mid-Victorians. The Great Western Terrace in Glasgow is still of an almost Regency rigidity, and certainly handsomer and more consistent—and more original at the same time—than the work of the period in England. The Caledonian Road Church at Glasgow represents a combination of very pure Greek detail with a type of asymmetrical composition similar to that of the Italian Villa style. A little fragmentary, it has none the less amazing qualities, above all in the fine svelte tower, which is a quite original creation, and in the detail of the clerestory, which reminds us of the similar detailing of Schinkel's clerestory in Germany.

A similar Classical rationalism appears in the detailing of Thomson's finest terrace, Moray Place, Strathbungo, where the upper storey becomes a completely free masonry post-and-lintel construction. The almost mathematical purity of proportions, and the elegance of the incised detail, achieves a standard in domestic architecture unknown in England, to which the use of stone as opposed to stucco lends further dignity. The

most conspicuous work of Thomson's, the St. Vincent Street Church, Glasgow, of 1859, indicates an increasing vagary and eclecticism of detail, the tower, placed asymmetrically as in the Caledonian Road Church, breaking into Assyrian, Egyptian and Hindu forms. Here the originality of Thomson's method of catering to the turgid taste of the mid-century is more conspicuous than the continuance of Greek Revival rationalism, but in the lower portion of the building there are many solutions of detailing at the openings of the greatest simplicity and effectiveness.

The culmination of Thomson's style is, perhaps, the Queen's Park Church, 1867, Glasgow, where the tower, now placed at the centre of the mass, is even more exotic in inspiration, but where the beautiful random ashlar masonry, which no one else ever used with classical forms, the Egyptian batter of the mass and the continuous horizontal grouping of the openings is of remarkable originality and distinction. The interiors of the early churches are most ingenious solutions of the problem of the Nonconformist meeting house type as opposed to the ritualistic Catholic and Anglican type, which was so essential a feature of the Gothic Revival in England. But the finest interior is that of Queen's Park Church, with its galleries supported on light, elegantly detailed cast-iron posts, and its remarkable stencilled colour decoration. The coincidence in England between the Gothic Revival in architecture and the ritualistic revival within the Anglican church is, of course, natural, and lends to the Established Church the leadership in architecture. But here in Scotland mediaeval ritualism was irrelevant, and hence the plans of Thomson are quite without ancient prototypes, and are much more direct expressions of the nineteenth century. The work of Thomson continues through the 'sixties, but essentially it belongs in spirit to the early Victorian period, enriched by the more eclectic and exotic feeling of the High Victorian period. Without following except in Glasgow, the work of Thomson remains of higher intrinsic significance, perhaps, than the vastly more important historical developments in the Gothic Revival and in Academic eclecticism in England.

ENGINEERING AND NEW MATERIALS: IRON BRIDGES

But although these various forms of historicism—that is, of architecture designed stylistically in reference to the past—appear completely to dominate the scene in the early Victorian period, to our twentieth-century eyes far more constructive developments were taking place outside the field of conventional architecture, in engineering. Here a new material, and, with the coming of the railroads, problems at least new in scale, led to monuments which are in no way tied down by precedents from the past, and which seem to us the primitives of the modern architecture of the twentieth century.

The first iron bridge, built by Wilkinson and Daly, at Coalbrookdale

The first iron bridge was that in Coalbrookdale, built by Wilkinson and Daly between 1773 and 1779. This was an arched bridge with iron cages substituted for stone voussoirs. The next important bridge, at Sunderland, 1798, was also of the arched type. It may have been designed by Thomas Paine. The finest scheme for an arched bridge was, unfortunately, not executed, that of Telford for the reconstruction of London Bridge in one iron span in 1801. Here the exquisite relationship of the upper and lower curve is marvellously associated with the lacy detail of the iron cages of the voussoirs. It has a quality of combined tensility and mathematical purity hitherto unknown in architecture—a sense of light, resilient strength which belongs wholly to the new material, and, we in the twentieth century must also believe, to a new age.

The suspension bridges, with the road bed hanging from heavy cables passed over masonry piers, represented an even bolder development of metal construction. The first suspension bridge of importance was built before the end of the eighteenth century in America, but the greatest early suspension bridge is the Menai Bridge, by Telford (1757-1834), (1819-24), which I understand is now menaced with reconstruction. Here not merely the material, but the actual principle of construction, is new, and the masonry appears as a compressed member. Unfortunately an associated architect added to the piers a certain amount of classical detail which is irrelevant, but not conspicuous. Not only was the Menai Bridge the first metal suspension bridge in England ; it remains, I believe, still the longest, which indicates the boldness which the new science of metal construction displayed in its youth.

Another early suspension bridge is that at Clifton, by Brunel (1806-59), begun in 1837. Here the setting of the rocky ravine provides a most romantic picture, and the detailing of the masonry piers with the paraboloid arches is quite unaffected by current architectural standards.

A third type of metal bridge is that in which the road bed passes within the truss, the tubular type, of which the finest example is Stephenson's Britannia Bridge near the Menai Bridge, of 1846-54. Here the detailing of the masonry, although simple, has a quality of originality and a positive æsthetic character which reminds one a little of " Greek " Thomson. England's great contributions to bridge building were these early bridges of which I have mentioned the chief examples. After the mid-century, progress, both technical and æsthetic, in this field passed to other countries.

GLASS

Another field in which the new material, cast iron, played an important part was that in which it was associated with glass, chiefly in the early Victorian period, in the building of large conservatories. A very fine early example is the Kew Palm House, built by Turner under the direction of Decimus Burton (1800-81) in 1846. Here the curved, almost bubble-like forms express beautifully the quality of glass, and the scale is such that the iron skeleton appears almost as lacy as in Telford's bridge project of 1801. But the greatest man in this field was Paxton (1803-65), the head gardener of Chatsworth, and a man of most varied attainments. The Palm House at Chatsworth, of 1837, is a very large and remarkable example, now unfortunately destroyed, not dissimilar to the Kew Palm House, which is still in existence. In 1850 Paxton built the Lily House at Chatsworth, where the remarkable skeleton construction of the leaves of a great African lily gave him further technical suggestions for the use of the new material.

THE CRYSTAL PALACE

But, of course, Paxton is remembered above all as the designer of the Crystal Palace, and the story of Paxton's introduction on the scene of the Crystal Palace remains particularly significant of the strange relationship between formal architecture, and indeed even formal engineering in the early Victorian period, and the force of imagination, the boldness of progress, which was the accidental equipment of only occasional men. The Building Committee for the Great Exhibition consisted of the Duke of Buccleuch, the Earl of Ellesmere, Charles Barry, C. R. Cockerell, William Cubitt (President of the Institution of Civil Engineers), Brunel, Donaldson, and Stephenson ; in other words, three important engineers and three important architects, predominantly opponents of the Gothic Revival. They held a competition in which there were 245 entries, and out of these 245 entries they gave 68 honourable mentions and 18 high honourable mentions, twelve of which, it is interesting to observe, were to French competitors. They did not, however, fix upon any one of these designs, and a substitute design was prepared, chiefly by Brunel, which was supposed to incorporate features from the approved designs. The project of Brunel, if we may so call it, would have required 15,000,000 bricks, and since the terms of the Exhibition required that the building should be taken down afterwards, the Committee knew themselves to be in an impasse, for the cost of demolition would have been very nearly as great as the cost of production.

Paxton, hearing of this situation—and it was well aired in Parliament and in the newspapers, with vehement protests against the necessary destruction of a portion of Hyde Park—one day, while at a meeting of the directors of the Midland Railway, sketched on blotting paper a concept for the Exhibition building which was essentially an enlargement of the Chatsworth Palm House. Taking it up with certain of the Commissioners of the Exhibition, he was encouraged to continue, and retiring to Chatsworth he produced in

Telford's proposed cast-iron London Bridge. 1801

From a print in the Science Museum, South Kensington

a few weeks a complete design, which he was again encouraged by the Commissioners to publish in the *Illustrated London News* on 6 July. Paxton's scheme, which was in modern terminology pre-fabricated, was so obviously superior to that of the Committee that the Committee themselves permitted many irregularities so that it might be bid for, and thus it was in fact almost immediately adopted. Fox Henderson & Co. agreed to build it for £79,800, if they might have the materials again after its destruction. This works out at 1d. a cubic foot. Chance Bros. provided the glass, which was more glass than had been made in the entire United Kingdom in a single year ten years before. Charles Wild was associated in the construction, and Owen Jones, known chiefly for his archaeological work on the history of ornament, provided the scheme of decorative painting—pale blue with touches of red and orange.

So the Crystal Palace went up with amazing rapidity, and was essentially completed in the late winter of 1851. To-day, when we give often as much as five years to the planning of an exhibition, and achieve for the most part very unsatisfactory architectural results, it is almost unbelievable that the scheme of Paxton should have been offered as late as the midsummer of 1850, and that the building should actually have been ready for use several months before the Exhibition was to open.

Prophets of calamity had suggested all sorts of difficulties—hail breaking the glass, lightning hitting the

Britannia Bridge, by Robert Stephenson. 1846-54

[*The Builder*

King's Cross Station, by L. Cubitt

cast iron frame—but the particular dilemma that arose was unexpected. Some trees were retained within the palace, an arched transept, indeed, being constructed for one particular elm which had a very vociferous champion in Parliament named Colonel Sibthorpe, and because of the greater warmth within the Crystal Palace, which was, of course, in effect a great greenhouse, the trees came out about two months earlier than they would normally have done. This attracted all the sparrows in London, and the situation was disturbing. The authorities did not dare to introduce any of the exhibits as they arrived, for fear of the damage that the sparrows would do to them, and the question of what to do about the Queen's impatient desire to visit the building was, until they had the sparrows under control, an extremely serious one. Various suggestions for getting rid of the sparrows were made, but they all ran up against the objection that while they might or might not destroy the sparrows they would certainly also do serious damage to the glass. So finally, in desperation, the authorities turned to that oracle to whom the early nineteenth century so frequently turned, the Duke of Wellington, and he provided the solution in two words: "Get sparrowhawks." So that with the sparrows out of the way in the spring of 1851 the Crystal Palace opened amid the wildest possible enthusiasm. Laymen in particular thought that a new age of architecture had opened, and the Crystal Palace, burnt last fall, remains the greatest architectural contribution of England in the nineteenth century and the most conspicuous prototype of the ideals of modern architecture in the twentieth century.

[*From a print in the Science Museum, South Kensington. Reproduced by permission of the London Passenger Transport Board*

Interior of Baker Street Station, 1863

The Crystal Palace grew up outside of architecture, almost, in a sense, outside of engineering. It owed its æsthetic qualities to factors hitherto unrecognised—the repetition of units manufactured in series, the functional lace-like patterns of criss-cross trusses, the transparent definition of space, the total elimination of mass and the sense of tensile, almost live, strength as opposed to the solidity and gravitational quality of previous masonry architecture. Alas, there was in England no very great development out of the Crystal Palace, although on the Continent and in America many imitations were built, all inferior to the original, and the Crystal Palace, via these imitations, played its part in the late nineteenth century development of metal skeleton architecture in America and on the Continent.

RAILWAY STATIONS

A few buildings of the mid-century in England show some relation to the imaginative use of metal of the Crystal Palace. Although the exterior of Bunning's Coal Exchange of 1846 is conventional Barryesque Italian Renaissance, the round court of metal covered with glass is a delightful example of this period, preserving its original colour decoration. The King's Cross Station of 1852 has two magnificent train sheds of metal and glass of a type frequently exceeded in size in this and the following period, but these particular metal and glass train sheds at King's Cross are not only remarkably well proportioned but also associated with a façade of stock brick of almost equal straightforwardness and simplicity. Alas, from this time on the archaeologically minded architects had their way with English railroad stations.

The line of engineering building passed almost literally underground after the Crystal Palace and the King's Cross Station. The finest works are, perhaps, some of the parts of the District Railway; for example, the Bell Mouth Entrance, with its curved metal beams, and also, making no use of new materials, but using masonry vaulting in a spirit comparable to that of the metal workers, the Baker Street Metropolitan Station, as it was when constructed in 1863. So that there is about the opening of the 'fifties a curious quality

of the end of a period rather than of the beginning.

TRIUMPH OF THE HISTORIC ATTITUDE

England had led in metal construction since the seventies of the eighteenth century, but now, despite all the enthusiasm for the Crystal Palace, the historic attitude of the architectural profession was increasingly to dominate, and it is not in England but on the Continent and in America that further developments along this line are to be found. In the words of Eastlake, referring to the Crystal Palace in his "History of the Gothic Revival" of 1872 : "It did not take many years to dissipate the dreams of universal philanthropy to which the Exhibition scheme had given rise, and with these dreams the charming visions of a glass-and-iron architecture may also be said to have vanished. If the structural details of the Crystal Palace teach us any lesson, it is that they are strictly limited in application to the purpose for which the building was erected and that even for such a purpose their adoption is not unattended by drawbacks. The Gothic Revival was little affected by the great event of 1851." And the Gothic Revival was what seemed to matter, and almost alone to matter, to Englishmen who were interested in architecture in the mid-Victorian period.

The Interior of the Crystal Palace, 1852, by Paxton

The R.I.B.A. Library Catalogue

About four years ago the Literature Committee decided that one of their programmes should be the production of a volume catalogue of the library. The first volume is now in the press and will be published in November.

The first and chief reason for the publication of a volume catalogue is that widespread use of the library by members and by the numberless architectural scholars who are now using it has always been impeded by the lack of a catalogue to enable those who cannot actually visit London to know what exactly is in the library. The catalogue now being prepared will give them a complete list of all books and manuscripts, which, supplemented by the current monthly accession lists which appear in the JOURNAL, will provide at any time the fullest architectural bibliography ever published. The use made of a library is exactly in proportion to the extent to which its contents and services are known. The catalogue will show the contents and will indicate the measure of the service which the library can render.

There is one other architectural library, the Avery library at Columbia University, which seems to be our equal, or near it; the magnificent Avery catalogue which was published in 1895 has been the token of a friendly challenge which we have long desired to take up, conscious in part that the existence of such a catalogue is an element in prestige which is more than a proud gesture, since by making public not merely the merits but also the deficiencies of a library a catalogue is a valuable means of drawing the attention of students to the collection and of attracting gifts. As such it is an essential step in the improvement not only in its use but in its contents.

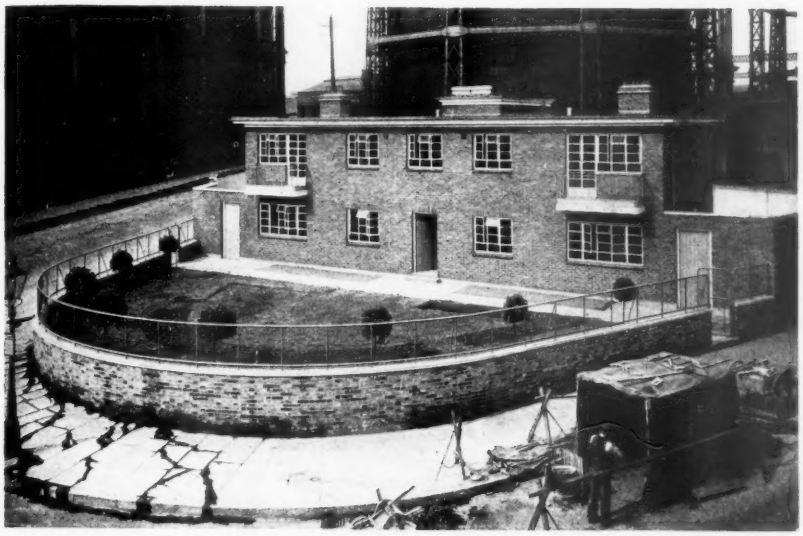
The opportunity which has made the publication of a catalogue possible now is the completion of the reorganisation necessary when the Institute moved to Portland Place. During the production of the card catalogue we had all entries printed and kept the type standing to use, as we have now used it, for a published volume. Exactly at the right moment Sir Banister Fletcher came forward with a remarkable gift of money which made possible the realisation of our ambitions.

Primitive man. One of Jean Goujon's woodcut illustrations to Jean Martin's translation of Vitruvius, Architecture or Art de bien bastir, Paris 1547

The existence of the present published volume is entirely due to this gift. Without it the catalogue would certainly never have been published at a price which would have been within the means of those for whom it is intended.

The catalogue is to be in two volumes. Volume 1 will be a complete alphabetical author list; Volume 2 a classified index and an index to classes. The first volume will make a book of about 1,500 pages; Volume 2 will be about half this size; both will be well printed and strongly bound. The price of Volume 1 to members will be one guinea and to non-members two guineas.

An order form will be issued in the next number of the JOURNAL; in the meantime it is hoped that everyone who is interested in the library will make up their minds to purchase the catalogue. The librarian will send anyone interested sample sheets and a fuller description than has been possible here.



EXPERIMENTAL FLATS, KING'S CROSS

Architect: JOHN DOWER, M.A. [A.]

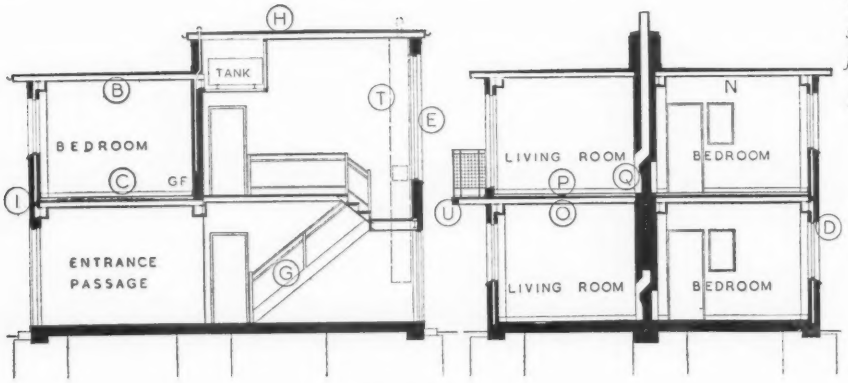
Experimental building to full scale is of particular value because it can be judged by standards of human needs. Laboratory tests are useful for establishing comparisons; but the ultimate test of materials must be one of use, either in the form of structure or equipment, related by planning. For example, in the matter of sound-resistance, laboratory tests can determine, under fixed conditions, the values of different materials, but only actual use will show how far a given structure is comfortable or intolerable to the users. Further, all building requirements are inter-related; for instance, a good sound-resisting material must satisfy in numerous other ways, such as cost, availability, ease of erection, wearing qualities, appearance. It is only when subjected to use that materials can be assessed as to their value in building.

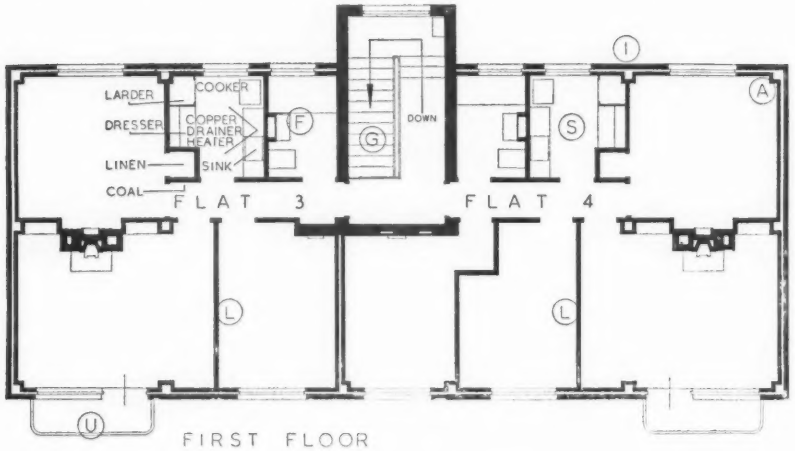
The products of several firms have been combined in a small block of tenement flats, recently opened at King's Cross, in order to test and demonstrate their uses in housing construction. The work is a practical application of the general research so far carried out by the Council for Research on Housing Construction.* Readers will remember that one of the Council's main contentions is that the use of a steel framework makes for increased ease of assembly and other advantages, besides making economically possible the use of higher buildings (of eight to twelve storeys) where high densities of population make this desirable.

Responsibility for the erection of the experimental block (of four flats) has been shared by the Sheet Steel Marketing Development Committee and the Gas Light and Coke Co. The latter company provided the site and will use the flats to house employees after the demonstration period. Tests and observations are to be undertaken by the Building Research Station and the National Physical Laboratory.

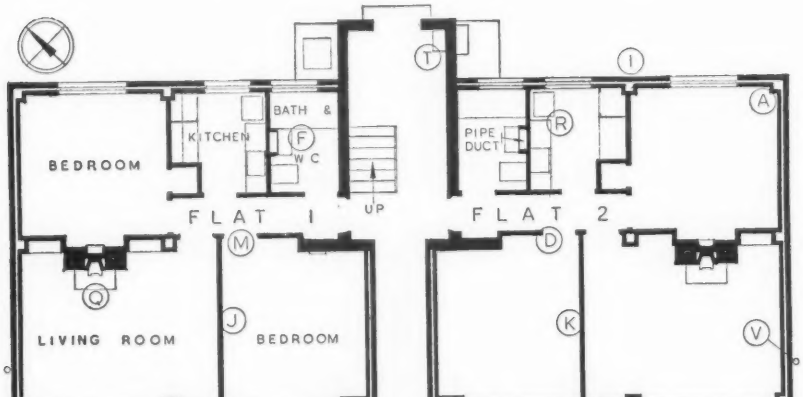
No entirely new materials have been used. The aim is to study and demonstrate the behaviour of new forms and combinations of materials that are already well tried and which are readily available in the open market. This is a very sensible line of approach, because it means not only that full advantage is taken of present resources in building materials, but also that anyone can employ the methods demonstrated without having to resort to specialist firms or to pay licence fees. The only limiting factors at present are the building by-laws, which the construction ignores in many respects. The experimental building was scrutinised very closely by the London County Council, who exercised their rights of waiver in the London Building Acts on several items, and have granted the building a temporary licence only. If, however,

* See First Report of the Council, *Slum Clearance and Rehousing*, reviewed in R.I.B.A. JOURNAL 7 July 1934 and 21 July 1934, and Second Report of the Council, *Housing Standards and Statistics*, reviewed in R.I.B.A. JOURNAL 23 February 1935.





FIRST FLOOR



GROUND FLOOR

Top left. *Section through the central staircase.* *Top right.* *Section through flats 1 and 3*

Reference to points of interest :—

A. Steel framework

B. Sheet steel floor and roof units

C. Floating floors

D. Pressed steel trim

E. Steel windows

F. Pressed steel sanitary fittings

G. Steel staircase

H. Bituminous roof surface

I. Brick-faced cavity walls

J. Corrugated sheet steel partitions

K. Plaster block partitions

L. Hollow tile block partitions

M. Steel doors

N. Pressed steel ceilings

O. Plaster board ceilings

P. Linoleum floors

Q. Gas coke fires

R. Gas kitchen equipment

S. Kitchen fittings

T. Steel rubbish chute

U. Steel balcony framing

V. Steel rainwater pipes

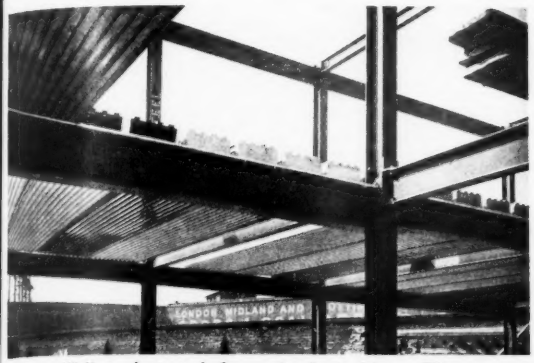


Fig. 1.—Hollow sheet steel floor units in position. They are not connected to the frame and rest on ½-inch specially woven asbestos strip

the methods used prove the London Building Acts and Model By-laws to be unnecessarily restrictive, that should be of service to the building industry. The principal "news interest" of this experiment will lie in the future, when reports come to be issued by B.R.S. and others on the results obtained.

Inspection of the building by architects and others interested is invited. Applications should be made to the British Constructional Steelwork Association, Steel House, Tothill Street, S.W.1.

Some readers may be inclined to view the experiment with some degree of suspicion that propaganda plays a more important part than pure research. They need not do so. It is of course clear that the contributing firms are animated by the desire to sell more of their products and that products by other firms, that might have been used, have not been included. If a new use for a material proves to be satisfactory, that will be to the advantage of the consumer as well as of the producer. If it proves unsatisfactory, the manufacturer concerned will at least have the satisfaction of knowing that it is an unprofitable line to follow and he need waste no more money on it. Further, because architects and builders (both critical by nature) see the thing in actual use, the resultant criticisms and discussions must eventually give an improved product. Indeed the building industry would benefit by more of these combined researches and it is to be hoped that this is the forerunner of many such.

THE PLANNING

This is according to the general principle of standardised planning recommended in *Slum Clearance and Rehousing*. The block consists of four flats (three of two bedrooms and one of three bedrooms) and is intended to represent a sample section of a much larger block. The units could be used much as they are at present in blocks up to five storeys in height. Minor alterations and the addition of lifts would permit their use in blocks of eight or more storeys.

The principal features are: (1) Access by internal staircases, which is preferred to balcony access as giving greater privacy. (2) All rooms open off a hall-passage. (3) Living rooms above the ground floor have private balconies opening off the living room. (4) A separate kitchen is provided in addition to the living room, this arrangement being preferred to the kitchen-living room and scullery. (5) The kitchen is grouped with the bathroom so as to concentrate all vertical service pipes, wastes and soil pipes in a vertical duct. The wastes and soil pipes are combined in a "one-pipe system." (6) The planning follows strictly standardised dimensions throughout, based on the steel frame.

CONSTRUCTION AND EQUIPMENT

The various items, which are the subject of experiment or demonstration, have been marked by index letters on the accompanying plans and section. Following are brief descriptions of the items, together with some comments made as the result of an examination of the building.

A. *Steel Framework.* The use of structural steelwork as the framework of buildings hardly requires demonstration. Here the principal point of interest is the design to strictly standardised dimensions. This, by reducing the number of components, tends to reduce the cost of fabrication of the steel members and makes for easier assembly both of the frame and of the filling units.

B. *Sheet Steel Floor and Roof Units* (Fig. No. 1). This is one of the most interesting features of the scheme. Hollow units of rectangular section made of enamelled sheet steel span between the structural members. The surface is keyed to grip concrete on the top and sides and plaster on the soffit. The concrete screed covering is carried down to form ribs between the units very much as a hollow-tile floor is filled, the resulting structure being a series of connected Tee beams. The whole is constructed without any shuttering and the dovetail sheeting, gripping the vertical sides of the concrete ribs, gives a considerable degree of reinforcement. Each steel unit is two feet wide and 12 feet span. When laid they can be used immediately as a working floor. No fixing connections are required. Each unit weighs 96 lbs. and can be lifted into position by two men. The whole floor when finished weighs only 21 lbs. per square foot. The system has the obvious advantage of ease of erection, the principal uncertainty being the life of the enamelled steel. Any cutting of the units is easily carried out with an oxy-acetylene flame. The flat roof units (Fig. No. 2) are similar to those used in the floor but have internal sheet steel bracing and no concrete ribs.

C. *Floating Floors* (Fig. No. 3). The researches into sound insulation, so far carried out by B.R.S., tend to show that the "floating floor" has a substantially higher degree of efficiency than other types. This construction consists of an upper floor slab of appreciable weight supported through resilient bearings by the structural fire-

resisting floor below. Fig. No. 3 shows that the floating floor in the demonstration flats is made by laying creosoted battens on ⅛-inch strips of asbestos fabric to which is nailed light dovetail corrugated sheet steel, enamelled as are the floor units. On this is laid a 1½-inch thick screeding, the finishing surface being heavy linoleum fixed with mastic. The ends of this floating floor are kept free from the walls and partitions, the resulting space being packed with strips of asbestos fabric. Additional insulation in the main structure is provided by placing strips of asbestos fabric on the steel beams as seatings for the structural floors. The value of this is, however, uncertain as sound paths through stanchions and wall units are likely to permit sound transference of noises, such as hammering on walls, through the structure itself.

D. *Pressed Steel Trim.* This is now so generally accepted in the building industry as to require little comment. One of its merits is that it tends to prevent the creation of harbourage for bed-bugs. To do this really successfully, however, it should be of moderately heavy gauge. Trims of light gauge may become bent through knocks from furniture, spring away from the plaster and thus create the conditions they are intended to prevent.

E. *Steel Windows.* These are of standard sections and forged bronze furniture. The design is, however, novel. The bottom row of panes in each light is fixed. This allows a tall window to be used, but keeps the opening lights a proportion that is sturdy and unlikely to distort. The windows have a new type of cavity subframe which spans the whole thickness of the wall, forming cills, reveals and soffits (see windows in Figs. 4 and 7).

F. *Pressed Steel Sanitary Fittings.* (Fig. 4). These are entirely new to this country and the examples here used have been imported from America. In that country pressed steel sanitary fittings are widely used and their exceptionally light weight gives them a ready market in ship fitting work. In Fig. 4 is shown a sink, draining boards and splash board made of one pressing which is stove enamelled. The cupboard base is made up of other pressings. Two of the baths and one of the basins fitted in the scheme are also pressings. The baths are unusually wide (three feet), rather shallow and the bottoms have flat flutings intended to prevent slipping. They are made with a moulded vertical panel on the outer face and rebates to take plastering on the other three sides, all in one piece. The use of pressed steel in other fields, for example motor car bodywork, indicates that mass production methods might produce sanitary fittings very cheaply. Cast iron baths and fireclay and earthenware basins and sinks have also been included, so that comparisons as to use and life can be made.

G. *Steel Staircases* (Fig. 5). These are also used extensively in this country, particularly on steel framed jobs, where they are often installed simultaneously

Fig. 2.—Sheet steel roof units being placed over the staircase well

with the steelwork and are used by workmen, but they have not up to the present been used in housing work. The only finishing they require is the provision of a suitable material in the sinkings of the treads, though on highly finished jobs they are often "disguised." Here the treads are filled with granolithic, the risers and flat balustrade panels being painted. A tubular bar on top of the balustrade forms a handrail.

H. *Bituminous Roof Surface.* This consists of two types of bituminous sheeting, provided by the same firm.

I. *Brick Faced Cavity Walls.* It is common knowledge that a trend of design in steel frame building is towards ever lighter panel fillings. All sorts of materials have been tried, their main requirements being stiffness, adequate heat insulation and low maintenance. In these flats a cavity construction has been adopted, the outer

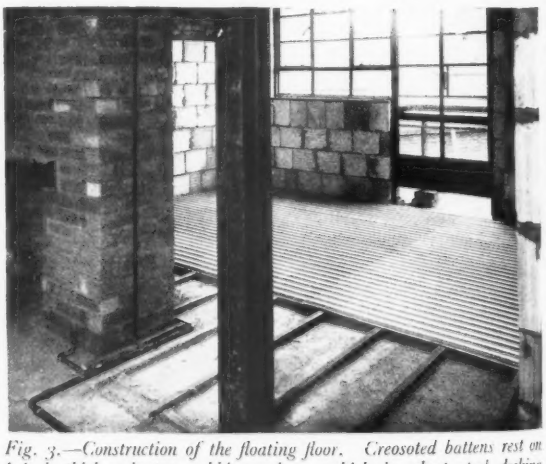


Fig. 3.—Construction of the floating floor. Creosoted battens rest on ⅛-inch thick asbestos webbing, above which is sheet steel decking covered with 1½ inches of screed (not shown)

Fig. 4.—A typical pressed steel sanitary fitting having bowl, draining boards and splash back in one piece.

skin being a 4½ inch wall of rustic Fletton bricks, the inner skins being three forms of partition. Brick has been used because it is cheap, readily available and involves the minimum of maintenance costs. At each floor level a lead D.P.C., splayed and falling outwards, has been fixed to throw any moisture penetrating the outer leaf clear of the steel member below. Openings in the walls are spanned by soldier arches, carried on the steel window sub-frames.

J. *Corrugated Sheet Steel Partitions.* In Flat I the partitions are formed of hollow panels of dovetail steel sheeting similar to those used elsewhere. They are packed with slag wool and plastered on face. This is perhaps one of the more questionable uses of sheet steel and the partitions will have to prove their value against powerful rivals, some of which have been used in this scheme. A disadvantage would appear to be the impossibility of tenants making fixings in them.

K. *Plaster Block Partitions.* In Flat II the partitions are "Pioneer" anhydrite blocks, which are familiar to the building industry.

L. *Hollow-Tile Blocks.* In Flats III and IV the partitions are hollow-tile blocks of brick earth, of typical form and a make that has been on the market about two years.

M. *Steel Doors.* Doors composed of two sheets of steel on a light steel framing are used in Flat I (see Fig. 6). These have the advantages of being non-warping and free from moisture movement. Flat II has wood cored doors flush faced with steel faced "Plymax." Those in Flat III are similar but are flush plywood and those in Flat IV are ordinary panelled softwood doors. Comparisons between these types of door should prove interesting, particularly when their life over a term of years, taken in conjunction with first costs, is considered.

N. *Pressed Steel Ceilings.* The upper flats have ceilings of enamelled steel sheeting. These have been on the market many years and their advantages and disadvantages are well known.

O. *Plaster Board Ceilings.* In the lower flats ceilings of ordinary plaster board have been provided fixed to grounds wedged to the dovetails of the sheet steel floor.

P. *Linoleum Floors.* The general floor covering is a stout linoleum stuck to the cement screed. Some new colours and mottled finishes which are worth inspection have been used. Two other floor finishes are shown in Flat III, namely, a cork composition floor in the kitchen and a coloured asphalt floor in a bedroom.

Q. *Gas Coke Fires.* Gas coke fires are fitted in all living rooms and are the principal means of heating the flats. Flush wall type gas fires are fitted in some of the bedrooms (see Fig. 6).

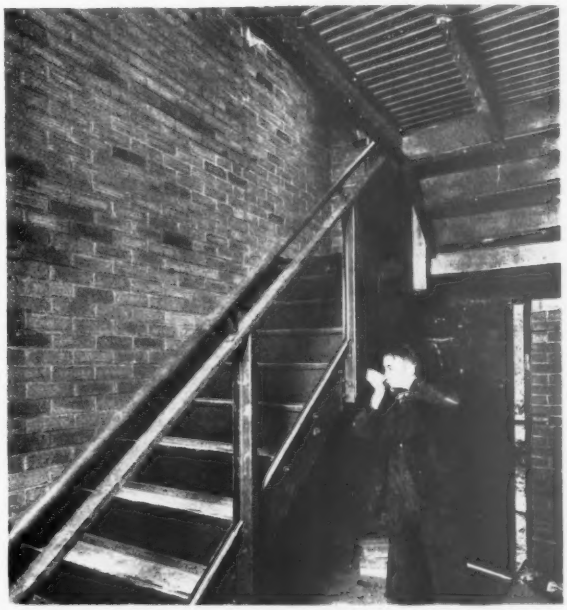


Fig. 5.—Installing the steel staircase. The only finishings required were granolithic treads and painting of the steelwork

R. *Gas and Kitchen Equipment.* In each kitchen is a pressure-type gas water heater supplying sink, basin and bath and also a gas heated copper and a gas cooker. Lighting is also by gas and is switch-operated from the door openings (see Fig. 6). Gas plugs are also fitted for use with irons, etc.

S. *Kitchen Equipment.* A special demonstration of kitchen layout and equipment suitable for a working-class flat has been installed by a specialist firm in Flat No. IV.

T. *Steel Rubbish Chute.*—A galvanised sheet steel rubbish chute is accessible from the staircase half landing. This has a special design of automatic doors intended to prevent the entry of insanitary smells into the building. The movement of pulling out the hopper closes immediately an inner door which is in turn opened when the hopper is pushed back.

U. *Steel Balcony Framing* (Fig. 7). This is an interesting, pleasant and safe design made up of steel bars, square mesh and a sheet steel base. The balcony floors are cantilevered continuations of the floor units which are cased in concrete and painted below and covered with a specialist waterproof tiling above.

V. *Steel Rainwater Pipes.* The R.W.P.s and gutters on the front of the building are stove enamelled pressed steel and those on the back galvanised and painted on the job.

CONTRIBUTING FIRMS

The following firms have collaborated :

STEEL COMPONENTS

Baldwins, Ltd., Fredk. Braby & Co., Ltd., Crittall Manufacturing Co., Ltd., Gorse Galvanizing Co., Ltd., Henry Hope and Sons, Ltd., Lewis Construction Co., Ltd., John Lysaghts, Ltd., H. H. Martyn & Co., Ltd., Jos. Sankey & Sons, Ltd., Steel Ceilings, Ltd., Synmar, Ltd.

CONSTRUCTIONAL MATERIAL

Broadbent & Co., Ltd., *slag wool products ;* Casebourne and Co. (1926), Ltd., *pioneer blocks and plaster products ;* Corkboard Research & Information Bureau, *cork insulation slabs ;* Limmer and Trinidad Lake Asphalt Co., Ltd., *asphalt screeding ;* London Brick Company, *Fletton bricks and partition blocks ;* Newalls Insulation Co., Ltd., *asbestos bricks ;* Ruberoid Co., Ltd., *roof waterproofing ;* Turner Bros. Asbestos Co., Ltd., *asbestos products ;* Venesta, Ltd., *plymax and wood doors.*

FITTINGS AND FINISHES

Armco, Ltd., *baths, sinks and wash-hand basin ;* British Kitchen Combination Co., *kitchen combination unit ;* Robert Bowran and Co., Ltd., *bitumen paints ;* Casebourne & Co. (1926), Ltd., *plastics ;* Catesbys, Ltd., *linoleum, plain brown ;* Corkboard Research & Information Bureau, *cork tiles ;* Fordhams Pressings, Ltd., *flushing cisterns ;* Gas, Light & Coke Co., Ltd., *heating and lighting equipment ;* Matthew Hall & Co., Ltd., *plumbing services ;* Kitchen Planning Centre, *built-in kitchen fittings ;* Limmer & Trinidad Lake Asphalt Co., Ltd., *coloured asphalt ;* Linoleum & Floorcloth Manufacturers' Association, *linoleum ;* Nobel Chemical Finishes, Ltd., *paints and distempers ;* Ruberoid, Ltd., *roofing tiles ;* House Furnishing, Ltd., *furniture and furnishing.*

Fig. 6.—View of a bedroom showing steel door, steel trim, gas fire, linen cupboard and gas light switch at door

Fig. 7.—Detail of the exterior, showing balcony, rustic Fletton brick skin and typical windows

REVIEW OF CONSTRUCTION AND MATERIALS

This series is compiled from all sources contributing technical information of use to architects. These sources are principally the many research bodies, both official and industrial, individual experts and the R.I.B.A. Science Standing Committee. Every effort is made to ensure that the information given shall be as accurate and authoritative as possible. Questions are invited from readers on matters covered by this section; they should be addressed to the Technical Editor. The following are addresses and telephone numbers which are likely to be of use to those members seeking technical information. There are many other bodies dealing with specialised branches of research whose addresses can be obtained from the Technical Editor. We would remind readers that these bodies exist for the service of Architects and the Building Industry and are always pleased to answer enquiries.

The Director, The Building Research Station, Garston, Nr. Watford, Herts. Telegrams: "Research Phone Watford." Office hours. 9.30 to 5.30. Saturdays 9 to 12.30.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101. Telegrams: "Timberlab Princes Risborough." Office hours, 9.15 to 5.30. Saturdays 9.15 to 12.

The Director, The British Standards Institution, 28 Victoria Street, London, S.W.1. Telephone: Victoria 3127 and 3128. Telegrams: "Standards Sowest London." Office hours, 9.30 to 5. Saturdays 9.30 to 12.30.

The Technical Manager, The Building Centre Ltd., 158 New Bond Street, London, W.1. Telephone: Regent 2701, 2705. Office hours: 10 to 6. Saturdays 10 to 1.

"DIAGRID" CONSTRUCTION

This article is intended to give a description, from the architect's point of view, of the new system of construction known as Diagrid.

The fundamental idea of Diagrid belongs to the realm of statics and consists in having two intersecting sets of parallel beams running diagonally on plan. The shortest beams are obviously those nearest the corners and owing to their rigidity they provide considerable support and end restraint for the longer beams. This results in a very notable reduction of the bending moments, etc., and thus makes it possible to use a smaller structural depth and a lesser amount of material, with a consequent saving in the cost of construction.

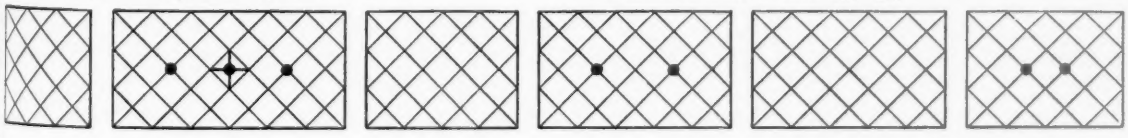
The accompanying Fig. 1 shows a number of characteristic arrangements on plan to suit various architectural requirements, such as single bays and bays in series, without or with internal columns, the same arrangements also being applicable to continuous bays. These and other similar lay-outs on plan can be combined with any desired shape in section, such as flat, pitched, ridge and valley, arched or domed. Thus, Diagrid may be said to be suitable for a wide range of constructional problems

Furthermore, there is a free choice of material; not only may reinforced concrete, structural steel and timber be used, but also, owing to the peculiar stress distribution, light metals (as in aircraft construction) and other lightweight building materials, such as pumice concrete.

The method of construction is in no way different from the usual; this may be seen from Fig. 3, which shows a large part of a very extensive reinforced-concrete floor in course of erection. The columns are located at the points of intersection of the cantilevers shown extending across the recessed portions of the structure and it is clear that the system enables the columns to be placed at varying distances apart as required for each particular building. It is further noticeable that certain grid beams run between the columns without being supported by them or by the cantilevers springing from them. A final point of special importance is that the beams may terminate at any point, however irregular the boundary may be; so that openings, e.g., for stairs, lifts and the like may always be accommodated, even when this involves alterations to a completed structure.

The shuttering boxes shown in Fig. 3 represent, as it were, a "negative" of the finished structure and indicate the octagonal boundary of each bay. The finished soffit of a similar type of construction is shown in Fig. 2, which illustrates the roof of John Keble Church, Mill Hill,* for which the architect was Mr. D. F. Martin-Smith [*A.*]. The clear span of the nave

Fig. 1.—Diagrammatic plan arrangements



* R.I.B.A. Journal, 6 February, 1937

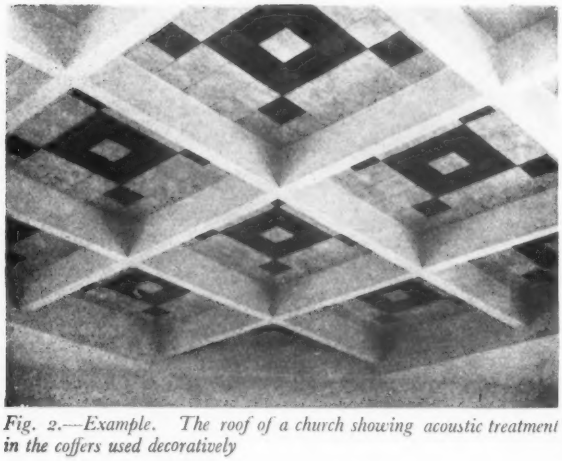


Fig. 2.—Example. The roof of a church showing acoustic treatment in the coffers used decoratively

is 52 ft. 6 ins. The structure is supported by columns at the four corners and the main beams between them, together with the corner beams and adjoining bottom slabs, form a closed octagon which is regularly sub-divided by the visible parts of the diagonal beams. The square slab panels have a clear span of about 11 ft. 6 ins., and are covered with coloured slabs of acoustic material, alternating in a chessboard pattern, 49 to each panel. The recessed coloured slab surfaces and the wide sub-divisions of the Diagrid octagon together produce a strong and interesting architectural form. Acoustically, such a coffered ceiling assists by reason of its shape in breaking up reflected sound. Hence this type of construction is useful in auditoria of all kinds where it is not desired to use the ceiling as a sound reflector. The coffers and the bottom slabs in the corners can also be utilised to obtain special lighting effects. The architectural possibilities in varying the soffit by decoration, colour treatment, lighting elements, etc., will be obvious.

A good example of such effects is afforded by the reinforced concrete roof to a large garage. The span is about 56 ft. and the sides of the rectangular plan are divided into three and five parts respectively. The grid beams springing from the division points are only 20 ins. deep and slope slightly up to a central longitudinal ridge. This pitched type of roof has static advantages and gives an interesting architectural effect. Certain panels, situated symmetrically to the centre lines of the structure, can with advantage be utilised for placing rooflights. These may be either lantern lights or pavement lights let into the roof slab. It may be noted, as demonstrating the economy of the building under construction, that it costs no more than

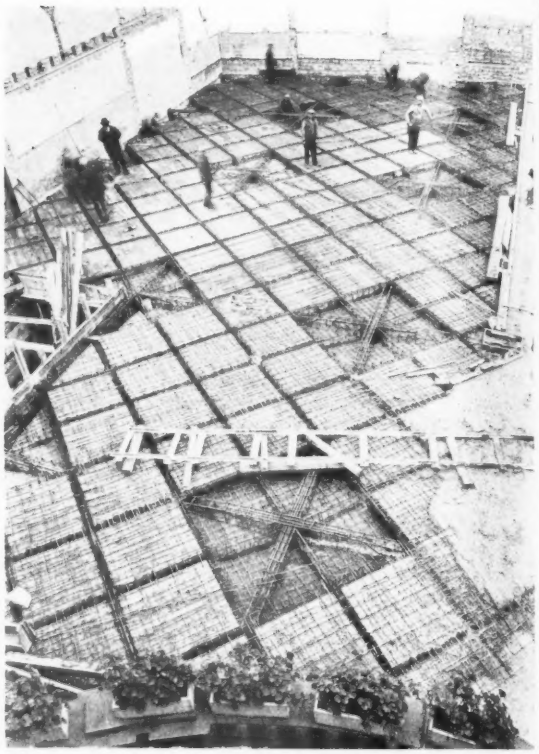


Fig. 3.—A Diagrid floor under construction. The shuttering here shown is a kind of "negative" which results in a soffit similar to that in Fig. 2

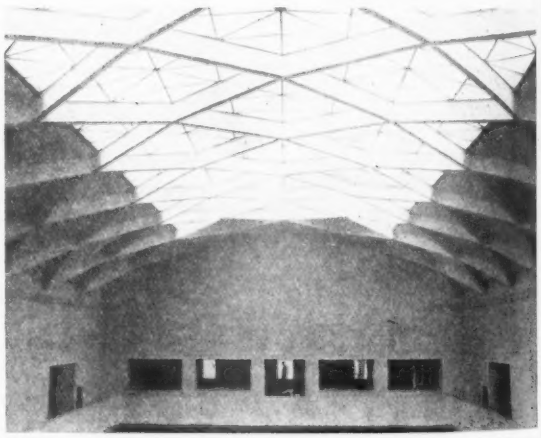


Fig. 4.—A curved and glazed roof. An alternative form is two slopes meeting at a ridge

an ordinary steel-framed structure covered with pre-cast slabs; the total quantity of concrete, including the 2-in. roof slab, amounts to just under 3 ins. equivalent thickness and the total quantity of ordinary mild steel to only about 2½ lbs. per sq. ft. A final feature to be specially noted is that the structure is completely free of horizontal thrust. Hence the supports, being subjected to vertical loads only, can consist of ordinary brick walls.

Fig. 4 shows the way in which large glazing areas can be harmoniously incorporated in a roof. In this case the Diagrid spans about 66 ft. and has a parabolic cross-section, the grid beams again being only 20 ins. deep. The middle half of the roof area in the longitudinal direction is covered with glazing, level with the upper edge of the grid beams and the glazing bars also run partly in the diagonal direction. The special kind of glazing used has been proved to be watertight and rustproof, and also not at all expensive, so that the good architectural effect is attained at a low total cost, the quantities for the Diagrid amounting to rather less than those given above for the pitched garage roof.

The last-mentioned illustration, with its sharply defined, narrow grid beams gives almost the impression of a steel structure; similar structures have been erected by using a framework consisting of ordinary rolled steel joists encased in concrete. In all cases the structure is completely without thrust and can be carried by ordinary brick walls without piers.

In the case of merely utilitarian buildings, such as factories and the like, the grid beams need, of course, not be encased; the grid can furthermore always be so designed that it closely fits any desired shape of roof. A solution of this kind, with unusual statical properties, is illustrated in Fig. 5; the roof surface is steeply pitched and repeatedly changes direction, nevertheless the Diagrid closely follows the purlins, without requiring any members projecting downwards, such as are necessary in ordinary roof trusses. There are also no internal supports whatever, yet the quantity of steel required is very much less than is needed with the customary methods of construction. A further point is that it allows of wide and completely uninterrupted door openings, without requiring the usual expensive and troublesome door girders; this is of special importance in, for example, aircraft hangars.

It may be mentioned, in order to illustrate the extensive field of application of the Diagrid method, that roofs of any desired shape can be built from standard 24-in. rolled steel joists to span up to about 300 ft. in the shorter direction, requiring altogether only about 7 lbs. per sq. ft. of ordinary mild steel, this amount, including purlins, connections, stanchions, etc.

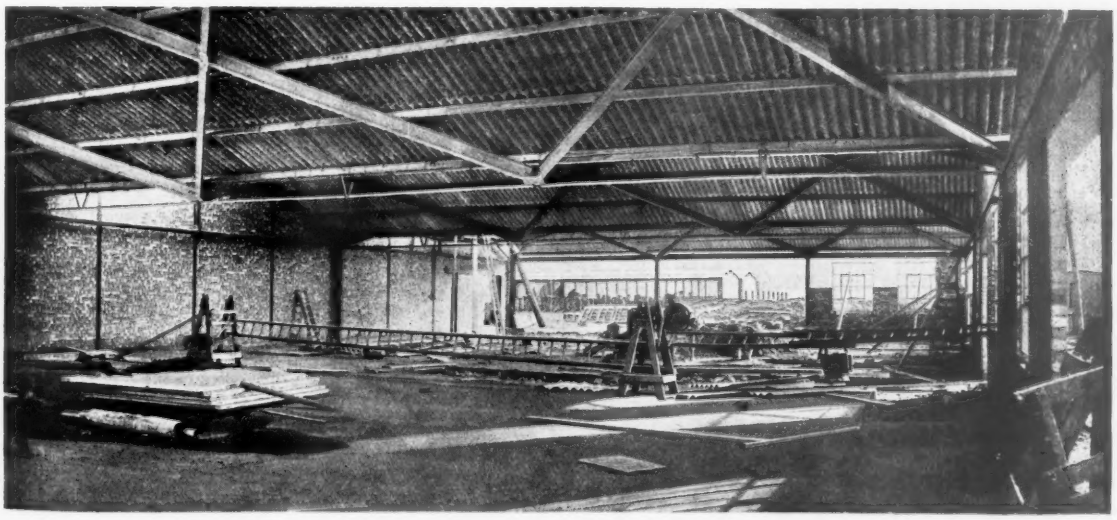


Fig. 5.—An example, built in structural steel, having successive pitches, no vertical steel members and no internal supports. Spans up to about 300 feet in the shorter direction are possible with this construction

THE DECLINE OF THE MASON-ARCHITECT IN ENGLAND

By DOUGLAS KNOOP and G. P. JONES

Until recently it was often too easily assumed that bishops and other ecclesiastics, who did much to further certain building operations, were in some sense the architects of their churches or monastic houses. It is by now clear enough (1) that, though some bishops and abbots may have delighted in architecture, we must look elsewhere for the mediæval architect, and it seems reasonable to seek him among mediæval masons. With the directive functions of masons in charge of large building works we have dealt elsewhere (2). Here our aim is to present such evidence as we have gleaned of masons being concerned with the planning and designing of buildings.

That elaborate buildings could have been erected without at least some rough plans and designs seems inconceivable, but the paucity of early references would suggest that in the Middle Ages plans did not play the same part as they do nowadays. In early building contracts or instructions, detailed directions concerning dimensions often appear to have taken the place of plans or "plots," as, for example, in the Fotheringay Church building contract of 1434 (3), and in the so-called will and other documents executed by Henry VI in 1448 relating to Eton College and King's College, Cambridge (4). In some cases, as in that of the contract of 1359 for the erection of twelve chapels round the choir of Vale Royal Abbey (5), the directions were not even very detailed. In all cases of this type the presumption is that the mason-contractor, or the master mason, prepared some kind of working drawings, though very possibly they were not done on parchment or paper. In any event it was probably common for what amounted to a plan, to the actual size of the building, to be marked out on the site. Gerald the Welshman presumably referred to an ordinary practice in the twelfth century when he described one who "after the fashion of surveyors . . . marked the turf, making lines on all sides over the surface of the earth, visibly drawing the plan of a building" (6). It was doubtless for the purpose of drawing that tracing houses were provided at larger building operations. Thus we find references to a tracing house at Windsor Castle in 1350 and 1397 (7), at Exeter Cathedral in 1374-75 (8), at Westminster Abbey in 1460-61 (9), and at York Minster in 1582 (10). The inventory of the masons' lodge at York Minster in 1400 shows that the equipment included two tracing boards (11); this not only implies drawing, but strongly suggests, if it does no more, that it was the masons who drew. In 1531 there was a tracing house at Westminster Palace, the accounts (12) recording the payment of 8s. for "two pairs of screws for tracery rods provided for the master mason to draw with in his tracery house," a reference which leaves no doubt as to who did the drawing. An entry in the later part of the same accounts (13) shows that John Smythe, mason, was paid 5s. a week "for that he is adjoined with the master mason in devysing and drawing." That the master mason was responsible for planning and designing may also be inferred from one earlier and one later reference. The earliest known version of the masons' "customs," as embodied in the Articles and Points of the so-called *Regius* MS. (14) (c. 1390), states (ll. 225-230) that the master mason was not to work at night except in study; the building account of the Tron Church at Edinburgh in 1636 (15) refers to the making of four great lodges for the masons to hew in, "with a study in the end thereof for the master mason."

(1) See A. Hamilton Thompson, "Mediæval Building Accounts and what we learn from them," *Trans. Somerset Arch. Soc.*, 1920.
(2) Knoop and Jones, *The Mediaeval Mason*, 20 *folg.*
(3) Printed in *The Mediaeval Mason*, pp. 245 *folg.*
(4) Willis and Clark, *Architectural History of the University of Cambridge*, vol. i, pp. 350 *folg.*
(5) *The Black Prince's Register*, part iii, pp. 361-3.
(6) H. E. Butler, *Autobiography of Giraldus Cambrensis*, p. 80. Possibly "latlay" in the Fotheringay Church Building Contract refers to a similar operation, i.e., laying out the foundation with a measuring *lath* or wand, of the kind known as *virga geometricalis* (Mortet and Deschamps, *Recueil de Textes relatifs à l'Histoire de l'Architecture*, p. 190). At Vale Royal Abbey in 1278 workmen were paid for "levelling a place on which the ground-plan of the monastery was to be traced" (Brownbill, *Ledger Book of Vale Royal Abbey*, p. 226).
(7) St. John Hope, *Windsor Castle*, vol. i, pp. 132, 133, 244.
(8) Exeter Fabric Roll, quoted in Oliver, *Lives of the Bishops of Exeter*, p. 385.
(9) Rackham, *Nave of Westminster*, 16 n.
(10) Raine, *Fabric Rolls of York Minster* (Surtees Soc.), p. 118.
(11) *Ibid.*, p. 17.
(12) P.R.O. *T. R. Misc.*, 251, fo. 106. The screws and rods were probably for a sixteenth-century form of beam compass.
(13) *T. R. Misc.*, 252, fo. 335.
(14) B. M. Bibl. Reg. 17 A 1. The Articles and Points are printed in *The Mediaeval Mason*, pp. 261 *folg.*
(15) Preserved in the Edinburgh City Chamberlain's Department.

Amongst the appurtenances of the Office of Works in the middle of the fifteenth century were certain "traceris" (1), which were presumably drawing offices. This suggests that, in some cases at least, the plans were prepared away from the site of the building to which they related, but there is nothing to indicate by whom they were prepared.

Some early building contracts contain references to plans, e.g., in 1381 Nicholas Typerton, mason, undertook to erect for John, Lord Cobham, part of the Church of St. Dunstan in Tower Street, London, according to the design (*devyse*) of Henry Yevele (2), the most prominent mason of his period (3). In 1395, Richard Washburn and John Swalwe, masons, undertook to do certain work at Westminster Hall, "according to a form and mould" made by advice of Master Henry Zeveley (4). In 1475 William Orchard, freemason, undertook to make a great window of seven lights in the west end of Magdalen College Chapel, Oxford, "according to the portraiture made by the said William" (5).

In the sixteenth century we find not only more references to plans or "plots," but also indications that some of them were prepared by persons other than masons. In Henry VII's will, dated 1509, there is reference to certain work at the King's Chapel, Westminster (i.e., Henry VII's Chapel) being done "as it is ordered in the plot made for the same chapel and signed with our hand" (6). At Eton College in 1510-11 Humphrey Coke was paid 6s. 8d. for making a "plat" for the cloister, which he apparently erected by contract (7). He was a carpenter (8) and thus illustrates the fact that carpentry and woodworking, as well as masonry and stoneworking, offered scope for designing and drawing. Another example of such designing occurred at Cambridge in 1623, when Henry Man, carpenter, was paid for drawing the designs for the library of St. John's College (9). In 1516 Coke was paid 6s. 8d., and Mr. Vertue (10) and Henry Redman (11) 13s. 4d. each, for making the plot of the west side of the court at Eton College, including Lupton Tower (12). In 1525 the master mason of Ely Cathedral was paid a fee by St. John's College, Cambridge, for drawing a draft of a tomb (13). In 1551 the Old Chatsworth accounts show that Roger Ward, the master mason there, was paid 20s. for drawing a "platt" (14), presumably for the new Chatsworth. A case of a bricklayer designing a building occurred at Lincoln's Inn, London, in 1561-62, when a sum of 6s. was paid "to Potter the bricklayer for making the 'plattes' for building the Inn" (15). In 1578 William Grombald entered into a "bargain" with Sir Thomas Tresham, of Rushton, to do certain work at Rothwell Cross. Amongst other conditions seven arches were to be wrought and set up and ashlar work was to be made, "according to the plott", and certain escutcheons were to be worked "according to a plott already drawn by the said W[illiam], showed unto the said Sir Thomas Tresham" (16). In 1596 a freemason and carver named Parris was paid £6 by Sir Thomas Tresham for working certain stones for the Triangular and the Hawkfield Lodges, then under construction, and "for drawing certain platts" (17). In 1598-1602 Ralph Symons and Gilbert Wigge, freemasons, erected the second court of St. John's College, Cambridge, according to "platts and uprights" prepared by themselves (18). The contract, together with the plans and elevations, are preserved in the college library. As a final instance of a sixteenth-century mason capable of drawing plans, we may record Walter Hancox, freemason, buried at Much Wenlock, Salop, in September 1599. According to the parish register he "was a very skilful man in the art of Masonry, in setting of 'plottes' for buildings and performing of the same" (19).

Reference has already been made to the fact that

(1) *Cal. Pat. Rolls*, *1446-52*, p. 510, and *1452-61*, p. 286. We have to thank Mr. J. H. Harvey for drawing our attention to these references.

(2) Building contract printed in *A.Q.C.*, vol. xlii, p. 111.

(3) See our article, "Henry Yevele and his Associates," *R.I.B.A. Journal*, May, 1935.

(4) Rymer's *Foedera*, III, iv, 105.

(5) Wilson, *Magdalen College*, p. 23.

(6) Scott, *Gleanings from Westminster Abbey*, 2nd ed., p. 72. It is not known definitely who prepared the "plot," but it was probably Robert Vertue, freemason (*Report of the Commission on Historical Monuments: London*, vol. i, p. 6).

(7) Willis and Clark, vol. i, p. 415.

(8) *Letters and Papers of Henry VIII*, vol. 3, part I, p. 162.

(9) Willis and Clark, vol. ii, p. 267.

(10) Probably William Vertue, freemason, one of the contractors for making the choir vault of St. George's Chapel, Windsor, in 1506 (St. John Hope, vol. ii, p. 384), a brother of Robert Vertue, and King's Master Mason from 1508 till his death in 1526 (Williams, *A.Q.C.*, vol. xliii, p. 100).

(11) Master mason at York Place in 1515 (*Exch. K. R.* 474/7), and at Westminster Abbey, 1516-28 (Rackham, *Nave of Westminster*, p. 63), and King's Master Mason from 1519 to his death in 1528 (Williams, *A.Q.C.*, vol. xxxix, p. 105 and vol. xliii, p. 101).

(12) Willis and Clark, vol. i, p. 418.

(13) *Ibid.*, vol. ii, p. 282.

(14) *Archaeologia*, vol. lxiv, p. 350.

(15) *Black Books of Lincoln's Inn*, vol. i, p. 337.

(16) *Hist. MSS. Com., Various Collections*, vol. III, p. xxxiv. For particulars of William Grombald see our paper, "The Rise of the Mason Contractor," *R.I.B.A. Journal*, 17 October 1936, p. 1069 n.

(17) *Ibid.*, p. lv. Parris was probably Andrew Paris, a carver who was paid for work at Trinity College, Cambridge, in 1600-1601. Andrew Paris died during that year and on at least two occasions the College paid relief for his sickness (Willis and Clark, vol. II, pp. 483 n., 487 n.).

(18) Willis and Clark, vol. ii, pp. 248 *folg.* Platts and uprights probably mean plans and elevations.

(19) *Hist. MSS. Com., Various Collections*, vol. IV, p. 423.

masons were not the only craftsmen who prepared plans and designs, but it is to their preparation by persons other than craftsmen that special interest attaches, as marking the beginning or the extension of a practice which ultimately led to the establishment of the profession of architecture. A possible case of this type occurred at Eton College in 1448-50, when Roger Keys (1), a clergyman, who was master of the works, travelled to Winchester and Salisbury to measure the choirs and naves of the cathedrals there, presumably in order that some point concerning the chapel at Eton might be decided, and later went to London to show the King a drawing or design (*portratura*) of the college (2). Whether he or someone else had prepared the drawing, there is nothing to indicate. A clearer, though somewhat unusual, case occurred at Hampton Court. At the end of a book of accounts for 1532-33 (3), the statement of James Nedham, the accountant, includes the item : " for riding to Hampton Court and being there in drawing of platts and making of molds for the new hall by the space of 22 days within the time of this accompte, at 4s. the day, £4 8s. od.", from which it seems to follow that Nedham (4), the accountant, drew " platts." In the accounts of the Surveyor General for 1543 (5), under the heading of Manor of Ampthill, occur payments at the rate of 16d. a day to Lawrence Bradshaw " the settar owt of worke and drawing of platte." He was a carpenter and succeeded Nedham as Surveyor of Works (6). In a letter of November, 1576, Humphrey Mitchell, clerk of the works at Windsor Castle, suggested that Henry Hawthorne, the surveyor, should make " plattes " of a gallery and banqueting house. The suggestion was adopted and four of Hawthorne's " plattes," three of the gallery and one of the banqueting house, have survived (7).

On at least one occasion a design prepared by Henry Yevele was referred to as a " devyse " (8) and in one document he is described as " deviser of masonry " (9). We have also seen that in 1531 John Smythe, mason, was adjoined with the master mason of Westminster Palace " in devysing and drawing " (10). At Sandgate Castle in 1539-40 we find a military engineer, Steven von Hashenperg, described in the accounts as " devisor " (11), and it is probable that he was responsible for planning and designing the castle, as the chief mason, Robert Lynsted, appears to have occupied a somewhat subordinate position, being described in the accounts as warden and being in receipt of the very modest remuneration of 10d. a day (12). The standing of the military engineer appears to have increased as the art of fortification became a recognized study ; he tended to become " devisor " as well as engineer. On the other hand, the standing of the master mason appears to have diminished as the art of fortification became a recognized study and as interest in architecture became more widespread about the time of the Renaissance ; he tended to drop from the position of mason-architect to that of foreman mason.

It would be a mistake, however, to think that by the seventeenth century the mason had entirely ceased to be concerned with planning and designing. A Rutland wage assessment of 1610 fixes the wage of a " free mason which can draw his plot, work and set accordingly " (13), which shows that the preparing of plans was still regarded as part of the duties of a free-mason in the early seventeenth century. It was at this period that Ralph Symons (14) and Gilbert Wigge (15), freemasons, were active in planning and erecting work at Cambridge and that John Akroyd (1556-1613) and John Bentley (1574-1616), the Halifax mason-architects and mason contractors, were responsible for three buildings at Oxford in the old tradition, viz., Merton Great Quadrangle, 1608, Bodley's End of Duke Humphrey's Library, 1610, and the Schools' Quadrangle, 1613 (16). In the 1630's Nicholas Stone (1586-1647), the prominent sculptor and tomb maker, acted as architect or surveyor at the erection of three gateways to the Physic Garden, Oxford, at the building of Cornbury House, Oxfordshire, and at the rebuilding of Goldsmiths' Hall, London (17). Throughout the century

(1) He became " supervisor of the work of the new college " [All Souls College, Oxford] in September, 1441, and Warden of the College the following spring (Jacob, " The Building of All Souls College, 1438-1443," *Historical Essays in Honour of James Tait*, p. 122). In April, 1449, he was presented with the living of High Onger, which he resigned a few months later (*Cal. Pat. Rolls, 1446-52*, pp. 242, 306). He became a Canon of Exeter and Archdeacon of Barnstaple in 1450 (Jacob, p. 133).

(2) Willis and Clark, vol. i, p. 398.

(3) Bodl. *Rawlinson* MS. D 775.

(4) He was appointed King's Carpenter in 1531 (*Letters and Papers of Henry VIII*, vol. 5, p. 104), clerk and overseer of the King's Works in 1533 (*ibid.*, vol. 6, p. 191) and Master of the London Carpenters' Company in 1536 (Jupp and Pocock, *Historical Account of the Company of Carpenters*, p. 623).

(5) B. M. MS. 10,109.

(6) Jupp and Pocock, p. 623 ; *Cal. Pat. R.*, 1547-48, p. 231.

(7) St. John Hope, vol. i, pp. 273, 276, 278.

(8) B. M. *Harl. Chart.* 48 E 43, printed in *A.Q.C.*, vol. xlii, p. 111.

(9) P.R.O. *Exch. K. R. Accts.* 472/10 and 8, quoted by W. Wonnacott, *A.Q.C.*, vol. xxi, p. 245.

(10) P.R.O. *T. R. Misc.* 252, fo. 335.

(11) Rutton, " Sandgate Castle, A.D. 1539-1540," *Arch. Cant.*, vol. xx.

(12) The ordinary masons on the job received 8d. ; Hashenperg's remuneration was apparently 4s. a day.

(13) *Archaeologia*, vol. ix, p. 200.

(14) Willis and Clark, vol. i, p. 555, vol. ii, pp. 248 *folg.*, 475, 477, 517, 693, 736.

(15) *Ibid.*, vol. ii, pp. 19, 250 *folg.*, 491.

(16) Hanson, " Halifax Builders in Oxford," *Trans. Halifax Antiq. Soc.*, 1928.

(17) Knoop and Jones, *The London Mason in the Seventeenth Century*, p. 24.

the old system and the new system appear to have existed side by side. Sir Christopher Wren (1632-1723) had as his contemporary, and on one occasion (1) as his master mason, Robert Grumbold (1639-1720), a mason-architect and mason contractor who designed and erected various college and university buildings at Cambridge in the late seventeenth and early eighteenth centuries (2). As late as 1703 the following passage occurs in T. N. "Philomath," *The City and Countrey Purchaser and Builder's Dictionary* (3): "The drawing of Draughts is most commonly the work of a Surveyor, tho' there be many Master-workmen that will contrive a Building, and draw a Draught, or Design thereof, as well as most (and better than some) Surveyors." How long the master-workman remained capable of drawing draughts or designs we do not know, but we are disposed to regard Robert Grumbold as the last great mason-architect of the old kind in England.

(1) At the new Library at Trinity College, Cambridge, 1676.

(2) Knoop and Jones, "The Rise of the Mason Contractor," *R.I.B.A. Journal*, Oct. 1936, p. 1069, and Webb, "Robert Grumbold and the architecture of the Renaissance in Cambridge," *Burlington Magazine*, 1925-26.

(3) P. 130. "Philomath" defines the *surveyor* (p. 11) as "he that designs the Model, or draws the Plot, or Draught of the whole Fabric; whose business it is to consider of the whole Manner, and Method of the Building, and also the Charge and Expence." *Architect* he defines as "A Master-workman in a Building; 'tis also sometimes taken for the Surveyor of a Building."

PORTRAITS OF INIGO JONES

By C. F. Bell [*Hon. A.*]

The query attached to the Editorial paragraph in the last number of the JOURNAL describing a supposed portrait of Inigo Jones, which is reproduced as the frontispiece, shows a cautious historical spirit greatly to be respected. Unfortunately the note beneath the reproduction itself appears to allow conjecture to go further than close observation of the evidence warrants.

Identifications of portraits on grounds of supposed resemblance are notoriously mere matters of opinion, subject to interminable friendly dispute. Equally endless discussion is possible as to whether Inigo Jones may or may not have been privileged, for reasons of health, to remain covered in the presence of his Sovereign, as there is no evidence of this one way or the other. It is therefore on this score not impossible, as the note says, that the figure in the picture attributed to Staelbent might represent the architect, but it seems to be wholly so that Jones should ever have worn the ribbon and George of the Order of the Garter which is to be seen round the neck of that figure.

Fortunately the desirability of discovering a new portrait of Inigo is not so urgent as it is in the case of some of his distinguished contemporaries, Admiral Robert Blake for instance, of whom no authentic or even plausible resemblance exists, as we have four indisputably genuine likenesses of Jones, and the field is extended by contemporary variants of one of them.

The earliest is the painter's engraving by Francesco Villamena, a head in an architectural frame of severe style, executed in Rome during Jones's third visit to Italy in 1613-14. Probably somewhat later than this, but belonging to the time when the architect was still taking the practical interest in figure draughtsmanship which was apparently one of the immediate fruits of this Italian tour, are two pen-and-ink sketches of his own head, now in one of the volumes of his drawings, from Lord Burlington's collection, in the library at Chatsworth. The more finished of these is reproduced on the title-page of the Walpole and Malone Societies' catalogue of Jones's *Designs for Masques and Plays at Court*. The well-known and frequently engraved picture by Vandyck was in all likelihood painted either during the artist's second visit to London, in 1632-34, or immediately after his return here at the close of 1635, as it was engraved by Robert Van Voerst who died in the following year. The original painting passed, as mentioned in the Editorial note in the August number of the JOURNAL, from the descendants of John Webb, Inigo's heir, to Sir Robert Walpole, and later with the rest of the Houghton pictures into the Hermitage Gallery, where, as it is not certainly known to have been amongst the works already sold by the Soviet Government, it presumably still is. There remain in England several good coeval copies, one at Barber-Surgeons' Hall, London, and another in the National Portrait Gallery. Scarcely, if at all, less valuable as portraits are two smaller works connected with the large picture. One of them is a drawing in red chalk, sometimes accepted as by Vandyck himself, and in any case by one of his immediate followers; this is also in the possession of the Duke of Devonshire. The other is a small painting in *grisaille* on panel, the property of the architect's descendants, by whom it has more than once been lent to public exhibitions. It belongs to a large group of similar studies, representing illustrious contemporaries of the painter, not all entirely by his hand, but generally worked upon or finished by him, of which the greater number are in the collection of the Duke of Buccleuch. They, and also a series of drawings resembling in style that at Chatsworth,

already mentioned, but as a rule more vigorous in handling, were preparations for the engravings in the well-known volume popularly known in its latest and most complete form as the Iconography of Vandyck. In many cases the preliminary etchings on the copper were the work of Vandyck himself. This was not so with Jones's portrait, which is entirely by Van Voerst ; but the existence of proofs from the plate in various stages of progress shows that great pains were taken with it, and as the engraver presumably knew the subject, at least by sight, the engraving may be supposed to possess something of the value of an independent portrait. Besides all these, authentic beyond any question, there exist two spurious or doubtful portraits worthy of mention because they both had Inigo Jones's name bestowed upon them at periods relatively soon after his death. One of them is an oval miniature of a picturesque looking man with a full beard, and flowing hair surmounted by a cap, inscribed with his age, 68, and signed by the painter, David des Granges. It is in the collection of the Duke of Portland, and is described and illustrated in the late Mr. R. W. Goulding's *Catalogue*, published by the Walpole Society (No. 79, Plate VII). A repetition belongs to the Duke of Devonshire. Although the indentification dates from the first half of the eighteenth century it seems to have no foundation more stable than a fancied resemblance to the genuine portraits. Probably, as in the case of the new recruit, the beard and cap provided the principal clue. The second pretender is a bust-size oil picture in the Ashmolean Museum. This belonged to the Founder, and its false name is already attached to it, with the reservation that it was " said to " represent Inigo Jones, in the catalogue made soon after the collection reached Oxford in 1683 (Mrs. R. L. Poole, *Catalogue of Oxford Portraits*, Vol. I, p. 174, No. 421). To those who are inclined to accept this sort of evidence, if it can be given such a name, the resemblance of the head to that of the Vandyck portraits might easily carry conviction that Jones is represented ; but when the canvas was cleaned forty years ago a date was found upon it which, although the last figure has disappeared, shows that it cannot have been painted less than eighteen years after he was dead.

For yet others, and they are doubtless a majority in these days of film-history, to whom liveliness is more convincing than historical truth, there are the numerous animated busts, based on the Vandyck, by sculptors of the barocco period, made when the cult of Inigo Jones inaugurated by Lord Burlington was at its height. Even for such effigies as these it may justly be said that, once the fictional and romantic element in them is frankly recognised, they are less misleading and treacherous than portraits contemporary with the subjects but named on historically uncertain, in fact wholly conjectural, grounds.

Obituaries

FRANK T. VERITY [*F.*]

The death of Mr. Frank T. Verity [*F.*], occurred at Bournemouth on 14 August.

Mr. Verity carried out a great amount of excellent work, first of all on his own account and latterly in partnership with his son-in-law, Mr. S. Beverley [*F.*].

Mr. Verity specialised in flats, theatres and cinemas, and many of our older readers will recall his magnificent Imperial Theatre, Westminster, designed for Mrs. Langtry, but unfortunately demolished about 1908. Another notable work of his early period was the Junior Naval and Military Club, Piccadilly, of which Mr. Goodhart-Rendel has said :

" The design of this façade is quite an ordinary composition lifted into being extraordinary by the masterliness of its proportions and details. I do not think that during the forty years of its lifetime anything has come into Piccadilly of a higher class of merit."

Francis Thomas Verity was articled to his father, the late Thomas Verity, and was also a pupil of R. Phene Spiers. He studied at the Royal College of Art, South Kensington ; at University College ; the A.A. and R.A. schools ; and in Paris. He gained the R.I.B.A. Tite Prize in 1889, in which year he was elected A.R.I.B.A., becoming Fellow in 1896. Mr. Verity held the appointment of architect to the Lord Chamberlain's Department, and was Corresponding Member of the Société Archæologique de France. In 1923, the second year of its institution, he won the R.I.B.A. London Architecture Medal with his Shepherd's Bush Pavilion, this being the first (and so far the only) award for a cinema theatre.

Mr. Verity's works were for the most part metropolitan except for a few, among which may be numbered the New Vaudeville Theatre and Paramount Cinema, Paris ; the Theatre Royal, Bath ; and Theatre Royal, Windsor. London buildings include the new façade to the Regent Street Polytechnic ; grandstand, etc., at Lord's ; Civil Service Co-operative premises, Haymarket ; annexe to the French Hospital, Shaftesbury Avenue ; and flats in many parts of London.

It was, however, as a designer of theatres and cinemas that Mr. Verity specialised in later years. He had the early experience, as we have already recorded, in this direction with Mrs. Langtry's Imperial Theatre, Westminster, the old Empire Theatre in Leicester Square, and the Scala in Charlotte Street, and he was a pioneer in the design of the cinema de-luxe, acting as European adviser for the Paramount Company, for whom he built the Plaza, Regent Street, besides a string of provincial " key " cinemas in Manchester, Newcastle, Glasgow,

and elsewhere. These were designed in conjunction with Mr. Beverley, and the firm, more recently, have done many cinemas for the Union Cinemas Company, together with the Paramount Theatre, Tottenham Court Road, on the site of Shoolbred's Store, and the Paramount Theatre, Birmingham, on the site of King Edward's Schools, New Street, Birmingham.

WILLIAM E. A. BROWN [*F.*]

Mr. William Brown, who died on 10 July, was born in 1876, and was trained first at the Polytechnic, Regent Street, and then in the office of Mr. George Lansdown [*F.*], whose partner he became in 1913, and who now continues the practice.

With his partner Mr. Brown built houses at Forest Hill, Wimbledon, and Downe, Kent; offices and shops at 45-49 Edgware Road; and various warehouses and workshops in Peckham, Hackney, and Southwark. During the war he was sent out to France by H.M. Office of Works for work in connection with light railways and workshops. Mr. Brown was a member of the Institute of Structural Engineers, and illustrated a Catholic Guide to Westminster Abbey by E. W. Leslie, S.J., in 1902.

H. J. CONNAL [*F.*]

Mr. Harold Connal, whose death we regret to record on 18 July, was joint principal architect of the L.M.S. Railway.

Mr. Connal was formerly head of the L.M.S. architectural department at Derby, to which he belonged for eighteen years before his transfer to London. He was responsible for designing the L.M.S. Research Laboratories in London Road, Derby, and many L.M.S. hotels.

TOM STEVENS [*Ret. F.*]

We regret to record the death on 18 June of Mr. Tom Stevens, a church architect who was well known throughout Hampshire, where he practised for over fifty years.

Mr. Stevens, who was born in 1849, was the eldest son of Samuel Stevens, a building contractor of Southampton. He practised in Bournemouth, first with Messrs. Tuck and Burton, then as a partner with Mr. Burton, and later alone.

His most notable work was St. John's Church, Surrey Road, Bournemouth. Other churches include Congregational churches at Westbourne, Boscombe and Swanage, and others in the Bournemouth district. He also built Tuckton Bridge, Hants, and several banks and private houses.

E. A. E. WOODROW [*Ret. F.*]

We regret to record the death on 12 July of Mr. Ernest Woodrow, who was an authority on theatre building.

He was born in 1860 and was trained first in the Royal Academy Architectural School, and later in the office of C. J. Phipps, of Mecklenburgh Square. From 1889 to 1895 he worked in the Theatre Department of the London County Council, and he then began practising on his own, retiring in 1927.

Mr. Woodrow built a great many suburban theatres and halls and was architect to the Spanish Exhibition at Earls Court in 1889. He was also honorary architect to the Finchley Memorial Hospital, and was responsible for the war memorial extensions. He was also Chairman of the Finchley Urban District Council from 1905-1908, and Chairman of its Building Society from 1907-1932.

Mr. Woodrow was the author of many articles on theatre construction and fire precaution in English and American periodicals, and was the author with Edwin O. Sachs of "Modern Opera Houses and Theatres," 1896.

F. J. CHAMBERS [*A.*]

We regret to record the death on 13 June of Mr. Frank Job Chambers, who had practised in the city since 1885 and for fifty years at 11a College Hill.

Mr. Chambers first worked in partnership with his father, Mr. Francis Chambers [*F.*]. He built warehouses for Messrs. Pilkingtons, Horse Shoe Wharf, Upper Thames Street; for Waterlow Bros. and Layton, Broken Wharf, East Paul's Wharf, and many other factory and warehouse premises. He was also responsible for building development at Orpington, Broadstairs and New Eltham. He is succeeded in practice by Mr. W. J. Ellis, F.I.A.S.

Mr. Chambers' family was associated for over a century with the City of London, and in particular with the Vintry Ward, his father, grandfather and himself all being churchwardens of St. Martin's, Vintry.

R. T. MILLER [*Ret. L.*]

Mr. Robert Miller, whose death on 30 May we regret to record, was associated for thirty-three years with the Metropolitan Asylums Board, first as architect in charge of their public buildings, and later as their surveyor. He was responsible for the building of about sixty large hospitals of varying types before the Board was absorbed by the London County Council in 1930, when Mr. Miller was put in charge of the section of the Architects' Department dealing with the construction of hospitals for special cases. He retired about three years ago.

Mr. Miller lived in Herne Bay for twenty-four years, where he was several times elected a Councillor, and was Life Governor of the Herne Bay Hospital, for which he undertook to be Clerk of Works when it was rebuilt.

C. W. CRUSH [*L.*]

Mr. Charles Crush, whose death took place on 16 June, was articled in Manchester to Messrs. Woodhouse & Willoughby, and practised in Manchester and Bolton, first in partnership with Messrs. Potts & Hennings from 1919-1933, and then by himself. From 1916-1919 he was on the staff of the Ministry of Munitions. With his firm he built many commercial, industrial and textile buildings, including a considerable number of large cotton mills both in Lancashire and abroad. He also built the Manchester Corn Exchange, the Blackpool Town Hall and the Stockport Sunday School. Mr. Crush also built, independently, the chapel and hostel at Salford Training College, Sedgley Park, Prestwick, and was surveyor to the Order of the Faithful Companions of Jesus.

A. M. HARDIE [*L.*]

Mr. Alexander Murray Hardie, who died in May, was born in 1872 and was articled to Mr. R. Wilson, Queen Street, Edinburgh, and Messrs. McCarthy & Watson. At the age of 25 Mr. Hardie started to practise by himself at 20 George Street, Edinburgh, where he continued during the whole of his career.

He built schools at Gorebridge, Newbattle, Stobhill and Dalkeith; the fever hospitals in Dalkeith and Loanhead; welfare institutes at Tranent, Prestongrange, Prestonlinks, Pencaitland and Gilmerton, and was responsible for housing schemes at Dalkeith. He was also architect to the Board of Control, Rosslynlee Asylum, and a Fellow of the Royal Incorporation of Architects in Scotland.

CORRECTION

We regret that in the obituary of Mr. A. G. Bond [*F.*], which appeared in the JOURNAL of 14 August, it was stated that his architectural tuition practice was to be carried on by Mr. C. W. Bond. The practice has been taken over by Mr. C. W. Box [*A.*].

Book Reviews

*THE FYLDE

The numerous areas about which town planning surveys and reports have been issued are frequently found to have one dominating characteristic, either natural or artificial. It is true in the case of this report, which is about that part of Lancashire—anciently called "Amounderness," now "The Fylde"—which includes the sea coast towns from Lytham St. Annes, through Blackpool to Fleetwood. The problems of planning for these holiday resorts and ports form the principal theme of the book.

The historical review and the presentation of the existing state of things are well done, they are sufficiently informative without taking too large a proportion of the book. It is pointed out that the report is intended as a guide and a foundation for more detailed planning in the area, and the survey rigidly adheres to these terms, but shows clearly that this statutory planning should not be long delayed. The maps are well conceived, but a note of their scale would be a very useful aid to the reader, who may have some difficulty in keeping in mind the size of the area. The use of reduced scale ordnance maps also makes it rather difficult to distinguish the names of places. This is a common fault with such maps. It is likely that simple but clear maps specially drawn for their purpose would be well worth while.

The traffic of the area is shown to be largely composed of holiday-makers, travelling by road and rail. Suggestions are made for the improvement of railway facilities and of road connections between the Fylde and Liverpool to the south and Yorkshire to the east.

The road proposals also include a very interesting suggestion for a scenic drive between Knott End and St. Michael's-on-Wyre, which while fulfilling a useful purpose will be of scenic interest as well, as it passes up the estuary of the River Wyre.

The authors believe that it is generally cheaper to make a new road than to improve an old one, but confess that the difficulty of persuading councils and officials of this has deterred them from putting such proposals forward. Perhaps, however, this very confession will have some effect on these gentlemen, and it is probable that the type of traffic concerned is best accommodated on new roads, for if you are on your way to Blackpool you do not wish to dawdle at wayside villages, and new roads, by-passing such places, would be in the best interests of both the traveller and the villager.

A diagram showing the actual traffic returns on some of the important roads would have formed a helpful addition to this section of the report. The figures, however, will no doubt be available to the planners concerned.

In connection with aerial development there is a very interesting proposal for an airport for both aeroplanes and seaplanes at Fleetwood.

The open spaces, existing and suggested, near the coast which are actually shown on the zoning map appear meagre. The rest of the coast line, from Fleetwood to Lytham, is zoned as suitable for development, to a depth of from one to three miles. It is, of course, hardly conceivable that the whole of this area will ever be fully developed, but there is a danger that, unless strict control be exercised, there may be enough sporadic building to destroy the value of any part of it as open space. This is surely a matter which should receive the very careful attention of all the authorities concerned.

Under the heading of open spaces a number of important roads have proposed "green belts" for development as parkways. This idea is particularly applicable to an area of this kind, for it is one to which many people of small or moderate means may retire, building for themselves small bungalows or houses on a convenient road frontage, semi-rural in environment, but avoiding too lonely a situation. Yet such roads are travelled by thousands of visitors in search of rest and beauty, and deserve special protection.

The importance of retaining and creating interest for the holiday-maker is frequently stressed. On page 10 the authors say, "More and more, we are convinced, it will be necessary for those who cater for the holiday-maker not only to provide those seaside amenities which are so rapidly spreading right round the whole coast of Great Britain but to watch for and seize every remotest chance which the topography of the area presents to help Nature herself to create the beautiful or, where natural beauties have been destroyed or fouled by mistaken utilitarian developments, to restore them."

This is perhaps the chief problem of the planner in this area—to co-ordinate the sophisticated development of one part with the rural character of the other. The recommendations of the report, if carried out, will do much to achieve this.

F. L. HALLIDAY [*A.*]

**Amounderness.* Report of the Regional Planning Committee for the Area of the Fylde. By Thomas H. Mawson & Son. Sm. fo. 232 pp.+27 figs. London: Batsford, 1937. 21s.

PARIS

THE SPIRIT OF PARIS. *By Paul Cohen-Portheim. 8vo. x+118 pp.+134 photos. London: Batsford. 1937. 7s. 6d*

Mr. Paul Cohen-Portheim's aim in writing a well-illustrated book entitled *The Spirit of Paris* is made remarkably clear in his foreword. He is writing for people who will visit Paris but who, without sympathetic help, may stay there without really seeing it, still less understanding that essence of the city which lies deeper than its sights and monuments.

Messrs. Batsford are to be congratulated on publishing a book which is easy to enjoy and full of just that kind of information which a really intent traveller wants. But the publishers are not to be praised for the close printing. Presumably this book may be read in a train or in a hotel bedroom with the lights in the wrong place; in that case the reader will not be thankful for any effort to squeeze up the text in order, perhaps, to permit of 31 pages of book advertising at its end.

Mr. Cohen-Portheim does not deal with the attraction of old Paris, in the leisurely and loving way of Mr. Georges Cain in his *Promenades dans Paris*. He embraces a wider field, and concludes with four unusual chapters which are as full of information as they are of understanding analysis. They are called "Paris and the Theatre," "Paris by Day and by Night," "The Capital of France," and "The World City."

Beginning with "Paris Through the Centuries," the author points out how Paris has managed to blend together the relics of earlier ages and yet keep pace with every sort of novelty. "In Rome everything new strikes one as an anachronism, in Berlin everything old as a curiosity; only in Paris is the miracle of a synthesis of periods and style accomplished."

Notre Dame leaves the author cold; but one can see that the quarter of the Marais, "the Faubourg", little delightful streets like the rue Barbet de Jouy, do not. And he makes clear that while the neighbourhood of Paris is the cradle of Gothic, the city owes its great mansions to the period of Louis XIV and its finest town-planning effects to that otherwise tepid ruler Napoleon III. We are reminded that the present Elysée was the residence of Madame de Pompadour; the tragic happenings in the Place de la Concorde are remembered afresh, there is a passing thrust at the ornateness of the "Opéra," and so we arrive at the present day with Citroën's advertisements on the Eiffel Tower and the new Cité Universitaire (with the Dutch College attributed to Le Corbusier instead of Dudok).

The chapter on "Streets, Squares and Vistas" rightly mentions the Avenue Wagram and Place des Ternes, little known to most foreigners, and is very sound in its characterisation, while the section on the Latin quarter will bring fresh information even to many who have lived in it and felt that "Les Deux Magots" was their spiritous home. About Montparnasse, Mr. Cohen-Portheim has true values, and is both just and trenchant; his "slant" is just as right as is his sympathetic treatment of the decadence of the Palais Royal, of the harmony of the Carnavalet, of the long-term value of Rodin's sculpture, and the remarkable fact that there is scarcely any quarter, even any street, in Paris in which works of art are not exhibited or bought and sold in some form or other.

The decay of the theatre, as opposed to its brilliance prior to the war, is something which anyone who lived in Paris at that time notices to-day with sadness; on the other hand the short and crowded brilliance of the Paris season has all the glamour of the past. These are points commented upon in *The Spirit of Paris*, always with point and with sympathy, as is also the fact that while Paris is by no means France, it is the nerve centre of the country and the luxury which the whole nation feels that it should "pay itself." The Baulieue, however, is more of a necessity than a luxury, and a faintly disagreeable problem as well, less dreary to us than the suburbs of London, but quite as negative in its own French way.

Paris is a city of the utmost spiritual freedom, and an exporter of stimulating impulses. He who hates it has not understood it. To such Mr. Cohen Portheim's book will be revelatory; to those who know and love Paris, it will be a refreshing companion, a reminder of old souvenirs and future joys!

HOWARD ROBERTSON [*F.*]

STORING ARCHIVES: A NEGLECTED ARCHITECTURAL PROBLEM

A MANUAL OF ARCHIVE ADMINISTRATION. *By Hilary Jenkinson. New and revised ed. 8vo. xvi+256 pp. London: Lund, Humphries. 1937. 12s. 6d.*

Mr. Jenkinson's manual is the standard work on all matters concerning the making, classification and preservation of archives. Since the first edition was published in 1922, Mr. Jenkinson, in the Public Records Office, and archivists everywhere, have had fifteen years' experience. In a note to his introduction, Mr. Jenkinson states that "we have in that time [since 1922] evolved what amounts to a new technique in more than one department of the work." This development has been due not merely to the passive acceptance of lessons learnt by trial and error, but by an active scientific analysis of experience and the conduct of carefully designed tests. In no section of the work is this more evident than in the housing and preservation of documents. This is directly the concern of architects.

As a result of the vigorous advocacy of the British Records Association, all local authorities are now made aware of the importance of local records of all sorts, and many of them have already provided proper muniment rooms in their civic and county buildings. Probably in the future no large, and few small, local authority headquarters will be without an archives store, and architects can expect to find them required in all future competitions programmes for buildings of this sort. The part of the manual on the physical defence of archives is the only authoritative description generally available which will give architects a good introduction to the planning of archive stores and the other apartments generally needed for binding, repairs and photography, etc. Mr. Jenkinson does not go into exact detail when dealing with "architectural" equipment, but wisely says only what type of presses are required, what kind of lighting is desirable, and what atmospheric conditions have been found safe. The subject is presented by Mr. Jenkinson in a way that is most helpful to architects; it is one that has increasing importance, and must not be neglected by the profession.

RATIONAL DESIGN

THE EVOLVING HOUSE. *Vol. I. by A. F. Bemis and John Burchard. Vols. II. and III by A. F. Bemis. Lge. 8vo. Vol. I 502 pp. Vol. II 605 pp. Vol. III 625 pp. Cambridge, Mass.: Massachusetts Institute of Technology. 1936. 3 gns.*

When the spirit of modern architecture was first inflicted on the profession at the beginning of this century it was seen before any thought had been given to its rightful existence. If architects had studied and followed the growth of these new ideas, their absorbing interest would have left no time for the petty antagonism which was the result of narrowly trained vision.

In spite of a general acceptance of this new outlook, the building industry is still completely out of touch with modern discovery.

There appears, however, to be some signs of revolution, and it is therefore vitally important that architects should follow carefully every step forward, not by just looking at the results (which, because they are not understood will be condemned), but by following the synthesis.

Apart from periodicals and reports, "The Evolving House, Rational Design," is the first book in the R.I.B.A. Library which describes a system of factory-made housing parts ready for erection, and although their real value is contained in the Appendix (a survey of existing methods capable of mass production), they are part of the development of a new building technique.

Bemis Industries, Inc., of Boston, Mass., proprietors of Acoustex and other building materials, have, in the public interest, conducted 17 years of research into low cost, mass-produced houses.

Albert F. Bemis, author of the triology of which "Rational Design" is the third part, decided that modern housing ills could best be overcome by private enterprise, on the same basis as the motor industry.

If Part III is to be approached in the right frame of mind, a few brief references from Parts I and II must be given.

Part I is an historical survey of the home from a cave to the present day house and concludes that "the Modernistic Intellectualism" of Europe is no reflection of contemporary conditions. Part II is a very complete statistical survey of American housing under the present economic system. Nothing is left out, from the conditions of labour and family income to the number of waffle irons per head of population.

The dwelling-house in America takes second place in the national assets and because it is often unhealthy to live in and a bad investment, this extensive accumulation of information is for the purpose of finding a solution to these problems. Criticism is made of the architects' education and also the shoddy methods of the building industry, and it is the latter which are overcome in Part III.

Many of Mr. Bemis's points are made on evidence from English practice and some notes from these are interesting, especially those on "Rent Restriction."

He gives credit to the system because "it is sometimes agreed that it avoided revolution" and condemns it because "there is no doubt that a considerable portion of the working classes in Great Britain could afford a higher rent."

Mr. Bemis suggests that if the Government are willing to subsidise "decent" houses for all, why not "decent" cars also. Previously, however, cars were described as luxuries and houses as the basic need after food.

Part III begins by reminding us that housing has not developed with the rapidity of transport and communication and that "mass production has come to stay," the modern approach to housing is shown to be through a complete market, climatical, social and economic recovery of existing conditions.

Those data are embodied in rational design. The whole point of the book is then made to include such conclusions as "flat roofs are better than pitched" and "curves are becoming obsolete."

Later it is obvious that these are most important because the basis of the theory which follows is "rectangularity," "modularity," "cubical module" and "matrix."

Here follows a very interesting description of design for mass production, which is unfortunately only taken far enough to discover the "cubical module."

The discovery is made thus.

The two elementary principles of mass production for the carcase of a house are :—

(1) uniformity of cross-section, at right-angles to the length (the length is the direction of movement in the machine) ;

(2) repetitive features along the length.

If both are to be equal and constant in three dimensions, the one interchangeable unit of measure is found only in the cube. Older modular design is condemned for not having structure as a basis.

The next stage is the choice of module and, having fitted most modern building methods into a 4-in. grid, a 4-in. cube is chosen, and several examples of modular design are given.

For future design a 3-in. cube is suggested and Mr. Bemis finds that several modifications are necessary to adapt his box of bricks to practice.

The advantages of the method are obvious. Squared paper can be used for sketch designs, which can be treated in elevation "horizontally, vertically or . . . mixed."

On the grounds that it is ethical and for the public welfare, the next chapter explains the need for patenting this new method and having asked the Government once again to restrain its efforts to public services and town planning, the methods for manufacture, distribution and erection are given.

Illustrations are profuse and interesting, especially the designs for a Modular Hall, Living Room, Porch and Bedroom, but quite the most useful part of the book is contained in the Appendix. Here is given a very extensive accumulation of efforts in pre-fabrication both in America and abroad, together with a questionnaire for sponsors, with answers, and even if all this appears to be outside the general routine of an architect's office now, it is part of what is to come, and will require a much more architectural control than can be given by a leading industrialist.

THE ARCHITECT'S COMPENDIUM

THE ARCHITECT'S COMPENDIUM AND ANNUAL CATALOGUE. *Edited by John E. Sears, F.R.I.B.A., assisted by J. E. Sears, Jr. 4to. London: Compendium Publishing Co., 1937. Two guineas.*

The *Architect's Compendium for 1937* has just been issued. It follows the model of previous years, and contains, in addition to a useful series of classified trade announcements, building regulations and bye-laws affecting design and planning, lists of architects and builders and a schedule of builders' prices, a list of district surveyors and a statement of their fees, a statement of recent legal decisions and other technical data. The Compendium fully maintains its place as one of the most useful books for an architect's shelves.

SMALLER AND BETTER INFIRMARIES

HOUSING THE INFIRM. *By Olive Matthews. 8vo. 42 pp. Published by Author, 44, Cresswell Place, London, S.W.10. 1937. 9d.*

Some months ago Miss Matthews applied her talents vigorously to improve the type and number of dwellings provided by local authorities and charitable societies for old people. It may be hoped that this her latest endeavour, to improve the administration, buildings, and equipment of "institutions" and infirmaries, will have as great success. This pamphlet deals only in part with problems over which architects have any control, but where she does touch the architectural problem, she talks good downright common sense, founded, obviously, on knowledge of many existing infirmaries and on wide sympathy with their inmates' needs.

She pleads throughout for smaller institutions than are usually provided, more humane administration, more colourful, and less "institutional" decoration, more equipment to supply the personal needs of old people, such as lockers to keep their treasured relics by them (a design for a bedside locker is given), general ward planning so as to avoid bedridden persons having to lie always facing a glaring window. These and numerous other details all receive sane and careful consideration.

Infirmaries are generally built by local authorities' architects. They may only seldom be able to guide the policy of administration adopted by their masters, but should not on that account be shy of Miss Matthews's reforming zeal, because within the framework of her argument is so much practical advice of universal reference.

SEASIDE HOUSES AND BUNGALOWS. *Edited by Ella Carter. 4to. 112 pp. London: Country Life. 1937. 6s.*

It is no disparagement of this book to say that it conforms to type. On each page is one photograph or more of a house exterior or interior and sandwiched among the photographs is a paragraph of information. General facts relating to site, peculiar requirements of the owner, etc., materials of construction and internal and external finish, some details of equipment and the cost with, sometimes, qualifying notes to show what is included. The author in her introduction discusses in general what is characteristic of seaside architecture, but seems to conclude that although differences between seaside building from place to place on the coast were noticeable and important in the past such local variations cannot be expected now that all materials are common property, nor is there now much obvious contrast between inland and seaside building, which is perhaps why houses at Whipsnade, Haywards Heath, Redhill and elsewhere inland have been included. The fact is of course that the holiday out-of-door attitude to life which in the past was accepted as a thing only for the brief holiday period is now accepted as a good healthy way of living all the year round in suburban and country homes as well as at the sea.

Something over forty houses, including ten bungalows, are illustrated and give a reasonably good general view of architect-built houses of this type. Of only few can it be said that there is any obvious seaside-ishness either in appearance or plan, there are few sun-porches, few houses with plan details specially devised for holiday-makers (has anyone designed a good way of keeping sand out of a house?), but the book is not intended as a collection of holiday houses only and includes quite a number of buildings intended for people whose permanent home is by the sea. A final section illustrates some items of equipment.

MR. GILL'S SUICIDE

SCULPTURE ON MACHINE-MADE BUILDINGS. *By Eric Gill. 8vo. 38 pp. City of Birmingham School of Printing. 1937. n.p.*

In 1936 Mr. Eric Gill gave a lecture to the Birmingham and Five Counties Architectural Association on "Sculpture on Machine-made Buildings" which has been printed and published as a pamphlet by the City School of Printing. The presentation of the pamphlet is an excellent example of the quality of work now being produced by Mr. Leonard Jay's pupils, who have made a book worthy of Mr. Gill himself. Mr. Gill's argument is compounded in his own colloquial aphoristic style of an admixture of theology, sociology, economics, genial abuse and high-spirited invective. He propounds innumerable problems which for the most part he leaves unsolved. His last word is that you "cannot improve machine-made buildings by the addition of hand-made sculptures," yet there seems to be room even now for Mr. Gill and the two or three other sculptors in Britain whose work is worth having on machine-made buildings even if it is all wrong in theory. "There are no such things as *decorative* sculpture and painting . . . no such things as symbolic sculpture and paintings"—or more emphatically, "symbolic sculpture is all b. nonsense", and that, it seems, is that.

TOWN AND COUNTRY PLANNING ACT, 1932. MODEL CLAUSES REVISED.

The edition of the Model Clauses issued in 1935 has now been revised. The revised edition embodies four or five new clauses, drawn up after consultation with the Town and Country Planning Advisory Committee, and a number of minor alterations suggested by experience gained during the consideration of schemes which have been submitted for approval. Page 5 of the Model contains a list of the principal amendments which have been made in the revised edition.

An edition of the Model Clauses without notes, for use in the actual drafting of schemes, will shortly be available.

Further copies of the Model Clauses, either with or without notes, should be purchased directly from His Majesty's Stationery Office, Adastral House, Kingsway, W.C.2; 26 York Street, Manchester, 1; 1 St. Andrew's Crescent, Cardiff; or through any bookseller.

At the same time a memorandum (T. & C.P. 11) has been drawn up, setting out some of the points on which local authorities preparing schemes have found most difficulty, and making suggestions for avoiding these difficulties.

ENGLISH QUILTING OLD AND NEW. *By Elizabeth Hake. 4to. 19 pp.+ 58 plates. London: Batsford. 1937. 5s. 6d.*

Quilting is a craft which has been revived since the depression largely among women in the depressed areas, who have for the most part been taught by "foreign" experts from the few counties in England where the old technique still survives (Durham and Wales). Mrs. Hake has been lucky enough to discover old quilters (from Somerset, Devon and Cornwall and Wiltshire) who have learned the craft not as a revived affair but from their grandmothers, and she has been able to collect a number of old quilts which have only recently been discovered. The result is contained in *English Quilting*, which is primarily a book for the would-be quilter who wants to carry on the traditions of her own county; but the lay eye cannot fail to be pleased by the very lovely rhythms which are used. The Border and Welsh patchwork have an almost magical angularity about them and it is interesting to see how similar are the Cornish, Portuguese and Himalayan patterns.

Notes

RETIREMENT OF MR. JOHN KEPPIE

Mr. John Keppie, R.S.A., Past President of the Royal Incorporation of Architects in Scotland, and a former Vice-President of the R.I.B.A., has retired from practice and has resigned his partnership in the firm of John Keppie and Henderson.

Among Mr. Keppie's most important buildings, that for the International Exhibition, Glasgow, 1888, may be mentioned, and a number of private houses in Scotland ; Anderson's College Medical School ; the Parish Church of Skelmorlie, the Canal Boatmen's Institute, Glasgow, and a large portion of the offices of the *Glasgow Herald*.

For many years Mr. Keppie was a governor of the Glasgow School of Art, being Chairman of the Board from 1920-1936.

STUDENTS' VISIT TO ROME

The seven students who took part in the visit to Rome last Easter, organised by the then President of the R.I.B.A., Mr. Percy Thomas, in consultation with the Allied Societies and the Recognised Schools, have now delivered their reports on the tour. The reports prove that the visit was an unqualified success. The students left London on the evening of 21 March, arriving in Rome at midnight on 22 March, where they were met by the Director of the British School at Rome, Mr. C. A. R. Radford.

During their stay in Rome they visited the main monuments of the city, and they inspected some examples of modern work. The last four days of the tour were spent at Pompeii. From this centre Paestum and the towns on the Sorrentine Peninsula were visited.

Some of the students returned direct to London, and some came back by way of Venice.

The scheme started by Mr. Percy Thomas during his Presidency of the R.I.B.A. provides for sending to Rome at Easter annually a party of not more than ten students, the financial provision being made by the Allied Society concerned, and the student being selected as a rule from the Recognised School of Architecture in the province of the Allied Society.

Most excellent arrangements were made by the Director of the British School at Rome, Mr. Radford, and his assistant, Mr. A. D. Trendall. As the reports show, the students greatly benefited by the trip.

R.I.B.A. FINAL AND SPECIAL FINAL EXAMINATIONS

India

The R.I.B.A. Examination Board in India have arranged to hold the R.I.B.A. Final and Special Final Examinations in Bombay from 12 to 20 November 1937. The last day for receiving applications, which should be sent to the Hon. Secretary of the R.I.B.A. Examination Board in India, "Gustad Chambers," Sir Pherozeshaw Mehta Road, Bombay, is 12 October.

LECTURES ON ARCHITECTURE

Mr. Daniel Roth [*A.*] is giving a course of twenty-nine non-technical lantern lectures on the history of architecture and modern architecture at the Holloway Literary Institute, Holloway School, Hilldrop Road, N.7, on Wednesday evenings from 7.30 to 9.30, beginning on 29 September. Special attention will be given to London buildings, and visits to Eastbury House, Greenwich Hospital, the R.I.B.A., Regency London, and so on are being arranged. The fee for the course is 7s. 6d. Further particulars can be had from the principal of the Institute.

THE FINAL EXAMINATION, JULY 1937

The Final Examination qualifying for candidature as Associate R.I.B.A. was held in London and Edinburgh from 14 to 22 July 1937.

Of the 222 candidates examined 103 passed (44 in Part 1 only) and 119 were relegated.

The successful candidates are as follows :—

Albarn, Edward.
Baillon, Louis Brabazon.
Beauchamp, Charles Philip.
Benson, John Franks.
Blank, Sidney.
Blease, Leslie (*Part 1 only*).
Boucher, Cyril Thomas Goodman.
Broadbent, Francis George (*Part 1 only*).
Brown, Lawrence Arthur.
Cooke, Peter Edward (*Part 1 only*).
Calder, Ian Fortune.
Coster, Cecil Wallace.
Cowan, Ronald (*Part 1 only*).
Crane, Charles Vincent.
Cunningham, John Joseph.
Daniell, James Henry (*Part 1 only*).
Darlow, Henry Arthur Jack (*Part 1 only*).
Dowland, Bernard Harold (*Part 1 only*).
Filmer (Miss) Beryl Leila (*Part 1 only*).
Fletcher, David.
Floyd, John Pinckston.
Foreman, Robert Walter (*Part 1 only*).
Foster, Robert Oswald.
Fowler, William Roy (*Part 1 only*).
Franks, Ronald Herbert (*Part 1 only*).
Frearson, Arthur (*Part 1 only*).
Gerrard, Arthur Eli.
Goodair, Alfred George.
Haggar, Alan Arthur.
Hammond, Leonard Holmes (*Part 1 only*).
Hawkes, James Kennedy.
Hawkins, George Heslop (*Part 1 only*).
Heritage, George Henry Reginald (*Mark of Distinction in Thesis*).
Hicks, Edward Charles Coleman.
Hobday, Harold Herbert Jordain (*Part 1 only*).
Hodgson, Arthur Philip.
Hogben, Dennis Alexander.
Hoskings, Kenneth le Garde (*Part 1 only*).
Humphrys, Derrick Raymond (*Part 1 only*).
Hurst, Ronald Walker (*Part 1 only*).
Jackson, Stanley John Herbert.
Jordan, Ernest Dennis (*Part 1 only*).
Kemp, Reginald Cecil.
Kennedy, Thomas Brian (*Part 1 only*).
Kilner, Denis Scott.
Kinghorn, Ernest.
Lane, Eric Alfred Jack (*Part 1 only*).
Larkin, George Ismay (*Part 1 only*).
Le Briéro, Theodore Paul Lucien (*Not a British subject*).
Lewis, Robert Kenneth.
Loyd, John Clulow (*Part 1 only*).
Macintosh, Laurence Alan.
Madge, Dennis George.
Martin, David Griffiths (*Mark of Distinction in Thesis*).
Mason, Ernest (*Part 1 only*).
Maudsley, John Alan (*Part 1 only*).
Mellor, Hugh Vernon.
Milsom, Frank George (*Part 1 only*).
Mitchell, Eric Walter James.
Morris, Noel Ennever Seton.
Moseley, Horace George.

Nash, Gordon Douglas (*Part 1 only*).
Nield, Denzil Bridge.
Otton, Frank Charles.
Oxley, Thomas Derrick (*Part 1 only*).
Parsons, William Michael Tracey.
Pastakia, Rustom Hormusji.
Peat, Edgar Fowler (*Part 1 only*).
Perryer, Henry Richard Douglas (*Part 1 only*).
Peterson, Arthur Frederick (*Part 1 only*).
Pickering, Joseph William.
Pickford, Alfred.
Pickmere, Ralph Arnold.
Pilkington, Thomas.
Pollard, George Walter.
Powell, Herbert John (*Part 1 only*).
Pratten, Fredrick Ralph (*Part 1 only*).
Proskauer, Albrecht (*Not a British subject*).
Ray, Gilbert.
Redfern, Ewart Brindley (*Part 1 only*).
Redknap, Philip Houghton (*Part 1 only*).
Reeves, Arthur George (*Part 1 only*).
Scott, Gilbert Preston.
Shannon, James Johnstone.
Smith, Alexander Jamieson.
Smith, David John.
Spooner, Horace Alexander Fraser (*Part 1 only*).
Stevens, Kenneth Arthur.
Swift, Arthur (*Part 1 only*).
Taylor, John Percival.
Tippetts, Russell Wardle.
Tooth, Douglas Ronald Noël (*Part 1 only*).
Torrens, Richard Michael (*Part 1 only*).
Turner, Frank Albert.
Turner, Frederick John William.
Ward, Ronald.
Watson, Alexander Frederick (*Part 1 only*).
Webster, Lewis Edward (*Part 1 only*).
White, Myles Frederic.
Williamson, Herbert Leonard (*Part 1 only*).
Wormald, Ronald Dodd.
Wright, Roland Keith (*Part 1 only*).
Wynn, William James.

The Special Final Examination

The Special Final Examination qualifying for candidature as Associate R.I.B.A. was held in London and Edinburgh from 14 to 20 July 1937.

Of the 55 candidates examined 16 passed (7 in Part 1 only) and 39 were relegated.

The successful candidates are as follows :—

Bowman, Frederick.
Bullen, Henry Walker (*Part 1 only*).
Byrne, Arthur Cecil (*Part 1 only*).
Callander, George Walker.
Derham, Reginald Douglas (*Part 1 only*).
Dixon, Colin Jack.
Laurie, William Kennedy.
Lawrence, Sidney George (*Part 1 only*).
Little, Richard.
Pegg, Alfred Lloyd Frank.
Shortall, John Francis.
Southgate, Frederick George.
Sturrock, Frederick George.
Tarn, William (*Part 1 only*).
Waddington, Frank (*Part 1 only*).
Whitley, Joseph Erle (*Part 1 only*).

The Examination in Professional Practice for Students of Schools of Architecture recognised for Exemption from the R.I.B.A. Final Examination

The Examination was held in London and Edinburgh on 20 and 22 July 1937. Of the 12 candidates examined 8 passed and 4 were relegated.

The successful candidates are as follows :—

Bubb, Sydney James.
Griffiths, Frederick William.
Kinnear, Ian Brown.
Le Rossignol, John Augustin.
Love (Miss), Margaret Jean Sutherland.
Scott (Miss) Stella Marcia.
Tew, Ernest Fredrick.
Windle, Colin William Ledger.

NOTES FROM THE MINUTES OF THE COUNCIL

19 July 1937

The Honorary Fellowship

It was reported to the Council that H.R.H. The Duke of Gloucester and the Earl of Harewood had been pleased to accept nomination for election as Hon. Fellows.

The Architects' Ordinance, Straits Settlements

On the recommendation of the R.I.B.A. Registration Committee, it was agreed to support the action of the Institute of Architects of Malaya in asking the Straits Settlements Government to amend Chapter 64 of the Architects' Ordinance, Straits Settlements.

Mr. Alan E. Munby

The Council were informed that owing to ill-health Mr. Alan E. Munby had been compelled to resign membership of the Science Standing Committee. It was resolved to write to Mr. Munby expressing the Council's thanks for his long and valuable services to the Institute and the profession.

The General Council for the National Registration of Plumbers

Mr. Ingalton Sanders [*F.*] was appointed as the R.I.B.A. representative at the annual meeting of the General Council for the National Registration of Plumbers held at Southampton on July 28.

The Late Dr. H. H. Jeffcott, Secretary of the Institution of Civil Engineers

It was resolved to write to the Institution of Civil Engineers expressing the Council's sympathy in the loss which the Institution has sustained by the death of their Secretary, Dr. H. H. Jeffcott.

Alterations to the Rules of the Devon and Cornwall Architectural Society

Alterations to the rules of the Devon and Cornwall Architectural Society were formally approved by the Council.

Alterations to the Rules of the Birmingham and Five Counties Architectural Association

Alterations to the Rules of the Birmingham and Five Counties Architectural Association were formally approved by the Council.

Suggested Census of Members

On the recommendation of the Executive Committee it was decided not to undertake a census of members, as it was felt, in view of the previous experience in this matter, that the replies would be insufficient to be of any value.

Membership

The following members were elected :

As Hon. Corresponding Members	25
As Fellows	4
As Associates	15
As Licentiates	7

Election 18 October 1937

Applications for membership were approved as follows :

As Hon. Fellows	2 applications
As Fellows	6 ,,
As Associates	26 ,,
As Licentiates	6 ,,

Election 6 December 1937

Applications for membership from overseas candidates were approved as follows :

As Associates .. .. .. 14 applications.

Reinstatements

The following ex-members were reinstated :

As Associates : William George Lloyd Cheriton
Alfred Eustace Habershon
Doris Howard Robertson
As Licentiate : Frederick Charles Ellis

Resignations

Oliver Gaunt [*F.*]
Henry Joseph Bissaker Hoskins [*A.*]
Percy Lingwood [*A.*]
Richard Holden Riley [*A.*]
Frank Alfred Tugwell [*A.*]
Helen Alma Newton Turner [*A.*]
Harold Scott Dalby [*L.*]
Roland Young Mayell [*L.*]
Francis David Strong [*L.*]

Transfer to the Retired Members Class

The following member was transferred to the Retired Members' Class :

As Retired Fellow : George Farquhar Pennington

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the Library. None of the journals mentioned are in the Loan Library, but the Librarian will be pleased to give information about price and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

Reprints of these reviews, printed on slips suitable for cutting up and mounting on cards, can be had from the Library. A subscription of 5s. covers a year's issues.

All the journals received in the Library (about 200) are indexed, reference being made to all important articles and illustrations so that subscribers can have a constantly expanding index to practically every type of building illustrated in the architectural journals of the world.

Members wishing to have reprints for the remainder of this volume can do so on payment of 6d. to the Librarian Editor.

It is hoped to print them on gummed paper as soon as a large enough number of members subscribe.

SCHOOL

BUILDER. *1937. 20 August. P. 322.*
Senior and Junior Elementary School, Stewartby, Beds, by O. P. Milne [*F.*].

EXHIBITIONS

ARCHITECTURAL REVIEW. *1937. September.*
Special number on the Paris Exhibition, including Circulation ; Design ; Display; article by Serge Chermayeff [*F.*].

ARCHITECTS' JOURNAL. *1937. 26 August. P. 325.*
Paris, 1937. General article with photographs by Howard Robertson [*F.*].

CONSTRUCTION MODERNE. *1937. 22 August. P. 766.*
The Baltic Pavilion at the Paris Exhibition, by A. Nurnberg.

CONSTRUCTION MODERNE. *1937. 22 August. P. 762.*
The Polish Pavilion at the Paris Exhibition.

ARCHITECT AND BUILDING NEWS. *1937. 20 August. P. 225.*
Danish Pavilion at the Paris Exhibition, by Tyge Hvass.

CONSTRUCTION MODERNE (PARIS). *1937. 8 August. P. 733.*
The U.S.S.R. Pavilion at the Paris Exhibition.

ARCHITECT AND BUILDING NEWS. *1937. 13 August. P. 193.*
The Spanish Pavilion at the Paris Exhibition.

CASABELLA (MILAN). *1937. No. 116. P. 6.*
Colonial Exhibition, Rome.

LIBRARIES

BUILDER. *1937. 13 August. P. 151.*
National Library of Wales : S. K. Greenslade and Adams, Holden & Pearson.

LIBRARY ASSOCIATION RECORD. *1937. August.*
Arts Library, Manchester University, by Thos. Worthington & Sons ; Sutton Coldfield Borough Library ; libraries in Chislehurst and Sidcup, and Belsize Branch, Hampstead, illustrated and described.

GOVERNMENT

AMERICAN ARCHITECT. *1937. August. P. 51.*
Recent U.S. Government buildings.

REVISTA DE ARQUITECTURA. *1937. July. P. 297.*
New skyscraper for Ministry of Public Works, Buenos Aires.

BAUGILDE (BERLIN). *1937. 15 August. P. 779.*
German Education Headquarters, Bayreuth, by C. Reissinger. With Nazi Hall of Honour.

CIVIC

ARCHITECTS' JOURNAL. *1937. 26 August. P. 345.*
Police Wireless Station, West Wickham, by G. Mackenzie Trench [*F.*].

ARCHITEKTURA I BUDOWNICTWO (WARSAW). *1937. No. 3. P. 67.*
Post office at Ciechocinek.

KENTIKU ZASSI (TOKYO). *1937. July. P. 941.*
Fire-brigade station, Kôjimati.

RESTAURANT

AMERICAN ARCHITECT. *1937. August. P. 57.*
Night Club, Miami, Florida, by R. L. Weed.

OFFICES

BUILDER. *1937. 20 August. P. 314.*
Offices for Corning Glass Company, New York, by Geoffrey Platt.

ARCHITECTURE ILLUSTRATED. *1937. August.*
" Steel House," Tothill Street, S.W., by Sir John Burnet, Tait and Lorne [*FF.*]. Façade in reconstructed Portland stone.

SOUTH AFRICAN ARCHITECTURAL RECORD. *1937. August. P. 245.*
Escom House. Headquarters building of the Electricity Supply Commission, including rentable office space, exhibition hall and conference room. Reinforced concrete structure.

ARCHITECT AND BUILDING NEWS. *1937. 20 August.*
Great Westminster House, Horseferry Road, by T. P. Bennett and Son.

INDUSTRIAL

ARCHITECTURAL RECORD. *1937. August. P. 100.*
Factories : special section. 40 pp. information, general articles, " flow analysis," safety measures, seven recent buildings, bibliography. A useful reference. A copy of this number being added to Loan.

BAUWELT (BERLIN). *1937. 12 August. Inset p. 1.*
Modern factory building, Bremen, by R. Lodders.

TRANSPORT

BUILDER. *1937. 3 September. P. 409.*
Terminal building, Basrah Airport, Iraq, by Wilson and Mason [*A., F.*].

WELFARE

BUILDER. *1937. 3 September. P. 414.*
Buildings for boys' clubs. Planning technique, by A. Llewellyn Smith [*A.*].

BUILDER. *1937. 20 August. P. 317.*
Almshouses at Gedling, Notts, by T. Cecil Howitt [*F.*].

MALAYAN ARCHITECT (SINGAPORE). *1937. July. P. 179.*
Home for the aged. Group of buildings by Ho Kwong Yew.

HOSPITALS

NATIONAL BUILDER. *1937. September. P. 47.*
Military hospital, Helsingfors, by H. A. N. Brockman.

ARCHITECTURAL ASSOCIATION JOURNAL. *1937. August. P. 116.*
Mogden Isolation Hospital, Isleworth, by P. J. B. Harland [*F.*].
BUILDING. *1937. August. P. 336.*
Sanatorium at Clavadel, Switzerland ; Institute of Pathology, Milan ; and Luxembourg Maternity Hospital.
CONSTRUCTION MODERNE (PARIS). *1937. 8 August. P. 741.*
The Edouard Herriot Hospital at Lyon. A very large group of some thirty blocks, by T. Garnier.

SPORTS BUILDINGS

ARCHITECTURAL RECORD. *1937. August. P. 75.*
Beach and tennis club, Hotel del Coronado, California : with swimming pool.
AMERICAN ARCHITECT. *1937. August. P. 60.*
Swimming and tennis club, Palm Springs, California, by Spencer & Landon.
AMERICAN ARCHITECT AND ARCHITECTURE. *1937. August. P. 87.*
General article on swimming pools.

CINEMAS

BUILDING. *1937. August. P. 324.*
The Gaumont Cinema, Finchley, by W. E. Trent [*F.*].
HET BOUWBEDRIJF (THE HAGUE). *1937. 6 August. P. 156.*
Three small cinema studios and club, well planned in relation to sight lines and entrances.

RELIGIOUS

ARCHITECT AND BUILDING NEWS. *1937. 13 August. P. 205.*
New Methodist hall, Collier's Wood, by E. D. Mills [*A.*].

DOMESTIC

R.I.B.A. JOURNAL. *1937. 11 September. P. 995.*
BUILDER. *1937. 6 August. P. 223.*
ARCHITECT AND BUILDING NEWS. *1937. 6 August. P. 171.*
NATIONAL BUILDER. *1937. September. P. 57.*
Demonstration flats, King's Cross, by John Dower [*A.*].
DESIGN AND CONSTRUCTION. *1937. August. P. 381.*
Supplement on Houses and Domestic Buildings, compiled by F. E. Towndrow and B. E. Verstone.
MODERNE BAUFORMEN (STUTTGART). *1937. August. P. 401.*
Holiday houses for gardens, mountains and lakeside. Many interesting timber buildings.
CASABELLA (MILAN). *1937. No. 116. P. 16.*
An interesting modern villa in Vienna, by F. Singer.

MATERIALS

BUILDING. *1937. August. P. 355.*
Fire resistance in buildings : 1. Materials, by C. W. Glover.
NATIONAL BUILDER. *1937. August. P. 27.*
Trees and timber. Lecture by E. H. B. Boulton.
BUILDING. *1937. August. P. 359.*
Stones and granites, by E. G. Warland.
BUILDING. *1937. August. P. 351.*
Comparative costs : Setting coats for wall surfaces, by R. V. Boughton.
ARCHITECTURAL FORUM (NEW YORK). *1937. August. P. 75.*
Issue principally devoted to the winning competition photographs of recent work in which glass had been used as an architectural and decorative material.

CONSTRUCTION

BUILDER. *1937. 13 August. P. 144.*
Smoky chimneys. An interesting article on fireplace design.

HISTORICAL

ARCHITEKTURA I BUDOWNICTWO.
Issue devoted to the history of Polish architecture and to modern Polish architecture.

BIOGRAPHICAL

ARCHITECTURAL REVIEW. *1937. August. P. 69.*
Jacques Ignace Hittorf, by Osbert Lancaster.
PENCIL POINTS (NEW YORK). *1937. July. P. 408.*
Richard J. Neutra. A full review of this important architect's work.

TOWN PLANNING

JOURNAL OF THE TOWN PLANNING INSTITUTE. *1937. August. P. 282.*
Report of the International Housing and Town Planning Congress, Paris, 1937.
JOURNAL OF THE TOWN PLANNING INSTITUTE. *1937. August. P. 286.*
Report of the Conference of the Garden Cities and Town Planning Association, 1937.

GENERAL

SOUTH AFRICAN ARCHITECTURAL RECORD. *1937. August. P. 267.*
Inaugural lecture at Capetown University by L. W. Thornton-White. Views on architecture and architectural training.
MODERNE BAUFORMEN (STUTTGART). *1937. August. P. 385.*
Planning and planting of gardens—part III.

Correspondence

PARIS, 1937

6 Cathedral Road,
Cardiff.
13.8.37

To the Editor, JOURNAL R.I.B.A.

SIR,—I thought your correspondent's article in the issue of 17 July was an admirable survey of the Exhibition. I had the pleasure early in July of visiting Paris, and made several visits to the Exhibition.

My own impressions in regard to its position in the centre of Paris and to its layout are quite in accord with those of your correspondent. The French certainly possess an enviable tradition in these matters ; the immense amount of trouble taken in preparation for the Exhibition and the money expended on making this great event one that would be worthy of our own generation were praiseworthy indeed. What one felt was that the Exhibition was a natural development of this most attractive part of Paris, with its famous river and embankments, parks and processional avenues, brought into the Exhibition scheme as outstanding features. The whole conception was so different from the usual exhibition layout with which we are familiar—in a suburb or some corner of a city, which has little or no relation to the planning at the centre !

I shared with many visitors from this country the sense of disappointment at the British pavilion. One of the best sites was allocated for this, but although the design had much that was attractive and spacious in it the unusual opportunities offered for taking full advantage of its riverside position and for producing a really representative exhibit of British life and achievements at the present time were missed. One noticed in many of the other national pavilions that they had succeeded in giving a sort of "cross-section" of the national life, showing not only one aspect of this but a representative picture of what that nation has done and is doing in the world. It is obvious that our authorities would not wish to compete with such purely national propaganda as was so well exemplified in the Russian, German and Italian pavilions. But short of this, it should surely have been possible to do something from Britain that was not confined to a glorification of the week-end idea and to sport and rural pastimes. It gave one rather a shock on entering our pavilion to see the hunting costumes and the sports outfits displayed; as if these, compared with what we are doing in the world to-day, were of real importance! Such great undertakings as shipping, iron and steel, and electrical works and the newer industries which have grown in England since the War might be non-existent. Other countries also showed by models and graphic statistical data what they are doing in regard to education, public health, social services, architectural development and so on.

Mr. Oliver Hill's building in itself has so many good features, notably its dignified sense of spaciousness and its admirable stairway, that with a different and much more representative scheme of exhibits we could have really done justice to ourselves.

No doubt it was because the Exhibition as a whole was such a splendid affair and France's own exhibits and the remarkable collection of other national pavilions provided so large a field for enlightenment that one felt the more disappointed by our British effort.

Yours faithfully,

T. Alwyn Lloyd [*F.*]

COTSWOLD STONE TILES

Amberley,
Gloucestershire. 6.9.37

To the Editor, Journal R.I.B.A.

Sir,—The Gloucestershire Branch of the Council for the Preservation of Rural England passed the following resolution at the last annual meeting of the Society:

> "That in view of the continued stripping of old Cotswold tiles from cottage and barn roofs for storage by builders and their re-use in new private houses and their replacement by unsightly substitutes, the Gloucestershire Branch of the C.P.R.E. feels it to be of the utmost importance to stop this market, and urges that architects, builders, and private owners be reminded that new stone tiles are available and that by using these they are encouraging a local industry."

Steps are being taken to secure the co-operation of Local Authorities, estate agents, architects and builders in the county, in furthering the objects of this resolution, and I have been asked to appeal through your columns to all other architects engaged on work in the Cotswolds for their support.

The progressive stripping of cottages and barns in the Cotswolds is an undoubted fact. This movement is certainly accelerated by the existence of a market for weathered tiles. Cases have come to the notice of the C.P.R.E. where the roofs have been deliberately bought off cottages and barns and transferred bodily to houses being built for new residents, but these tiles are more generally bought from stocks accumulated in the anticipation of the market. New-comers to the district who wish to build in the local style are for the most part unaware that new tiles normally can be obtained which are satisfactory in price and quality. The cost of a roof laid with new tiles is often less than if it is laid with old tiles bought for the purpose. As to the colour, new-comers to the district might be informed that new tiles weather very quickly and in a few years are almost indistinguishable from old ones.

If architects would make it a rule to recommend to their clients the use of new stone tiles, and if builders would do the same, and, in addition, refrain from laying up stocks of old tiles for sale, they would be helping to preserve the character of our Cotswold cottages and farm buildings and would at the same time be helping to keep alive a local industry.

I am, Sir, Your obedient servant,

Fabian Ware.

Chairman, Gloucestershire Branch of the C.P.R.E.

MEMBERSHIP LISTS

ELECTION OF STUDENTS R.I.B.A.

The following were elected as Students R.I.B.A. at the meeting of the Council held on 19 July 1937:—

Ashworth: Miss Joan Mary, "Crossways," Bebington, Cheshire.

Bingham-Powell: Charles Herbert, 21 Clanricarde Gardens, London, W.2.

Blow: Richard Purcell, 3 Carlos Place, London, W.1.

Diack: Gordon David, 358 King Street, Aberdeen.

Hill: Frederick Alexander Rowland, 15 New Street, Dudley.

McCulloch: Alan James Godfrey, 27 Lanville Road, Liverpool, 19.

Nicol: Arthur Wyllie, 10 Highpoint, North Hill, N.6.

Roworth: William Leslie, 24 Saxe-Coburg Place, Edinburgh.

R.I.B.A. PROBATIONERS

The following were enrolled as Probationers of the Royal Institute during the month of July 1937:—

Apte: Udhas Mahader, Plot No. 226, Matunga, Bombay, India.

Bagley: Victor Lawrence, 17 Hubert Road, Clacton-on-Sea, Essex.

Ball: Brian William Bradford, "Teviotdale," Clarence Park, Weston-super-Mare.

Banister: Robert, 10 Alice Avenue, Leyland, Lancs.

Barnes: William Charles, 22 Stanley Road, Oxford.

Bollon: Clarence Montague, 49 Stafford Road, Walthamstow, E.17.

Brown: David, 36 High Street, Perth, Scotland.

BROWN: VICTOR ARCHIBALD, 24 Embleton Road, Lewisham, S.E.13.

BRUNSKILL: DELPHINE FRANCES LAVINIA, 28 Ember Lane, Esher, Surrey.

BUCHANAN: MAITLAND CAMPBELL, 2 Learmouth Terrace, Edinburgh, 4.

BURGESS: ROBERT GEORGE WILLIAM, 72 Garden Avenue, Mitcham, Surrey.

CLARK: JOHN FORBES, "Hillcrest," 73 Sedgley Road West, Tipton, Staffs.

COLLINS: ROBERT, 9 Warwick Street, Monkswearmouth, Sunderland.

COOK: HERBERT GODFREY, 16 Grey Terrace, Ryhope, Co. Durham.

DALE: NORTON DOUGLAS, 23 London Road, Southampton.

DAMANIA: MINOCHER MANECKSHAW, 84A Cowasji Patel Street, Fort, Bombay, India.

DAVIDSON: JOHN RICHARD MCALLISTER, 1 Avenue House, St. John's Wood, N.W.8.

DAWSON: RONALD BENSON, Mountain View, Queen's Road, Kendal, Westmorland.

DEWHIRST: DENNIS CARLTON, 10 Lumley Road, Liverpool Road, Chester.

DYAS: JACK BRIAN, 149 Paynes Road, Southampton.

EDWARDS: GEORGE LEWIS, 55 Richmond Road, Cardiff.

EMSLEY: RONALD GORDON, 29 Torrington Park, N.12.

EVANS: ALFRED JOHN ALAN, Dorset Lodge, Station Road, Wylde Green, Birmingham.

FERGUSON: PERCIVAL RICHARD, "Rydal," Lynfords Avenue, Runwell, Essex.

FINDLAY: GEORGE KENDRICK, 75 Lady Margaret Road, Southall, Middlesex.

GARDNER: EDWARD ANTONY, 35 The Mall, Swindon.

GAY: GEOFFREY REEVE, 123 Main Road, Gidea Park, Romford.

GODDAY: LESLIE HENRY, 2 Eileen Road, Selhurst, S.E.25.

GRAHAM: ROBERT MALCOLM, "Ashley Villa," Lancaster Avenue, Newcastle, Staffs.

GRAY: MALCOLM, 5 Fifth Avenue, Heworth, York.

GREAVES: RONALD ALFRED, 24 Longwood Gardens, Ilford, Essex.

GREGORY: WALLACE GERARD PAUL, Broadwater, Oatlands Drive, Weybridge, Surrey.

HANSON: HARRY, 50 Armorial Road, Coventry.

HERNIMAN: EDWIN RICHARD, "High View," Quarhouse, Brimscombe, Glos.

HICKES: ARTHUR CLAYTON SMALLWOOD, "Truro Vean," High Wickham, Hastings, Sussex.

HIRST: MELVERN, "Shillong," 24 St. Romans Terrace, Edinburgh, 10.

HORNETT: ALFRED ERNEST, 41 Ealdham Square, Eltham, S.E.9.

HUTTON: ALEXANDER, 6 Appin Crescent, Dunfermline.

IRVING: MARY NINANNE, 125 Waterloo Road, Birkdale, nr. Southport.

JOHNSON: ROY HENRY, 43 Dingle Road, Beacon Park, Plymouth.

JOPLING: VICTOR THOMAS, "Oxhey Corner," Hatch End, Middlesex.

KENDALL: WILLIAM HENRY FITZHUGH, 29 Milbourne Lane, Esher, Surrey.

KENDRICK: ALBERT HERCULES, 12 Prior Street, Port Talbot, Glamorgan.

KHAMBATA: PHEROZE JIJIBHOY, 127 Churchgate Reclamation, Bombay.

LANE: ALEXANDER JOHN, 12 Cheyne Avenue, Snaresbrook, E.18.

LAWRENCE: DOUGLAS BERNARD, 44 Rose Lane, Crewkerne, Som.

LEVY: ALBERT PHINEAS, 110 Holmleigh Road, Stamford Hill, N.16.

LYNHAM: GEORGE ALLIN, Fernleigh, Heoldon, Whitchurch, Cardiff.

MAMTOORA: DVARKADAS NARAYANDAS, 54 C.P. Tank Road, Bombay, 4.

MARNER: DUDLEY LIONEL SYDNEY DAVIES, The Den, 8 Whitgift Street, Croydon, Surrey.

MOATE: FRANK, 14 West Avenue, Penkhull, Stoke-on-Trent, Staffs.

MUNRO: IAN ARCHIBALD, "The Croft," Dochfour Drive, Inverness.

MURRAY: JOHN THOMAS, 17 Parklands Drive, Broughton, nr. Preston, Lancs.

NIPAUL: GAUPATI PANDURANG, 7 Banham Hall, Cross Lane, Girgaum, Bombay, 4.

OVENDEN: RONALD JOHN, 103 Northcote Avenue, Southall, Middlesex.

PRESTON: PHILIP ERNEST, 305 St. Sepulchre Gate, Doncaster.

RAMSAY: DONALD, 150 Ferry Road, Monifieth, Angus, Scotland.

RHODES: PETER STEPHENSON, "North Lea," Meadowside Road, Bromborough, Wirral, Cheshire.

ROBERTSON: ALEXANDER LINDSAY, 12 South Methven Street, Perth, Scotland.

ROBSON: CHRISTOPHER ELIC, 19 Keats Avenue, Southwick, Sunderland, Co. Durham.

RYDER: DENNIS ALBERT, 51 Exeter Road, Southgate, N.14.

SEARLE: DAVID ODELL, London Central Y.M.C.A., Great Russell Street, W.C.1.

SLIPPER: ARTHUR WILLIAM, 42 Sundew Avenue, W.12.

SNOWDEN: JOHN HARTLEY, "The Nook," 152 Millhouses Lane, Sheffield, 7.

SOUTHWOOD: ROBERT CHARLES, 34 Premier Street, Nottingham.

STARK: IVAN ALEXANDER, "Fairlight," Winlaton-on-Tyne, Durham.

STEEDMAN: GEORGE SINCLAIR GIBSON, 14 Viewfield Terrace, Dunfermline.

STUTFIELD: ELIZABETH, "St. Patrick," Gerard Road, Kenton, Middlesex.

TANSLEY: HARRY MAYNE, 19 Cranley Mews, Cranley Gardens, S.W.7.

THAKKAR: HIRJIBHAI RATTANSINGH, 48 Hughes Road, Bombay, No. 7, India.

THIRSK: JOHN HORACE STANLEY, 10 Snaresbrook Hall, Wanstead, E.18.

THOMAS: NORMAN DAVID, 19 Cosmeston Street, Cathays, Cardiff.

TROTT: BENJAMIN THOMAS, "Southleigh," Queen Street, Yetminster, Sherborne, Dorset.

TUCKER: JOHN ANNAL DEWES, "Vanesbury," 8 Kirby Road, Leicester.

VICK: FRANCIS NORMAN HECTOR, Normarie, 1 Ringwood Road, Parkstone, Dorset.

WARD: BERNARD VALENTINE, 50 Victoria Road South, Southsea, Hants.

WATSON: ROBERT, 4 Mary Place, Brucefield, Dunfermline, Fife, Scotland.

WILSON: OLIVER, 37 Windsor Terrace, Westoe, South Shields, Co. Durham.

WITHERICK: ALBERT, 9-10 Wakley Street, City Road, Islington, E.C.1.

WOOD: CHARLES ALTHAM, Romeyns Court, Great Milton, Oxford.

YOUNG: JAMES WRAIGHT, St. Ives, St. Mary's Road, Dymchurch, Kent.

ALLIED SOCIETIES

ROYAL INSTITUTE OF THE ARCHITECTS OF WESTERN AUSTRALIA INCORPORATED

We have received the annual report for 1936-37.

The officers of the Institute for the new session 1937-38 are as follows :—

President : R. Summerhayes ; *Ex-President :* A. D. Cameron ; *Vice-President :* K. C. Duncan ; *Hon. Treasurer :* W. T. Leighton ; *Hon. Secretary :* O. V. Chisholm ; *Hon. Assistant Secretary :* H. T. Forbes.

Among the points referred to in the report is the present membership, which consists of two Life Fellows ; two Honorary Fellows ; 24 Fellows ; 31 Associates ; two Retired Fellows and one Retired Associate.

The practice of holding the President's address as a public function in the Savoy Hotel, Perth, has been revived and the presidential address of Mr. A. D. Cameron last year was a great success. A design class has been inaugurated at the university under Mr. W. T. Leighton, to take the place of the atelier at the Perth Technical College, which has been closed. Students had competed for prizes offered by the President and other members of the Institute, and a number of members were completing their training in England.

In 1936 the sixth very successful architectural exhibition was held in Perth Town Hall, which aroused much public interest, and it was proposed to hold another this year.

Members of the Institute had been successful in a number of competitions. Messrs. R. Summerhayes and E. F. Kohler had won the Brisbane King George V Memorial open competition for the whole Commonwealth.

SOUTH WALES INSTITUTE

Visit to Electricity Showrooms, The Hayes, Cardiff

A visit to the new showrooms of the Cardiff Electricity Department, arranged jointly by the Cardiff Civic Society, the Central Branch of the South Wales Institute of Architects and the Welsh School of Architecture, Cardiff Technical College, took place on the evening of Wednesday, 7 July.

After refreshments and the showing of two films, Mr. Percy Thomas, P.P.R.I.B.A. (the architect for the work), explained the scheme, and Principal Rees, Vice-Chancellor of the University of Wales and Chairman of the Cardiff Civic Society, thanked the Electricity Department of the City of Cardiff for the arrangements which had been made for the visit. He pointed out that one of the objects of the Civic Society was the spreading of beauty in Cardiff outward from the Civic centre, and that in the building of their showrooms the Electricity Department had taken a step in this direction. He congratulated the Electricity Department and the City Council on having appointed Mr. Percy Thomas as their architect for this work and pointed out that the University of Wales is shortly to confer an Honorary Degree on him.

The visitors were then divided into four parties, and were shown round the building by Mr. Percy Thomas and the officials of the Electricity Department.

SCHOOL NOTES

THE BARTLETT SCHOOL OF ARCHITECTURE

The following awards have been made at University College, London, in the Bartlett School of Architecture :—

Entrance Exhibitions :

1. J. C. Eastwick-Field (Repton School).
2. A. J. R. Jennings and J. Mumford (Whitgift School, Croydon).

Donaldson Silver Medal (awarded by the Royal Institute of British Architects) : A. M. Foyle.

Herbert Batsford Prize : W. E. Hiner.

Architects' Journal Prize (for the best final design produced in the Day School by a 4th Year Degree or Diploma Student) : Y. Perlstein.

The Builder Prizes (for the best sets of measured drawings of old work) (1936) : Senior : A. M. Foyle ; Junior : 1, A. P. B. G. Sutton ; 2, Enid B. Colley and Helen Drill (equal).

Sir Andrew Taylor Prize (for best set of drawings, combining construction and design, by a 4th Year Student) : P. Holland.

Architecture Atelier :

Alfred Bossom Medal : B. B. Learoyd.

Bossom-Davis Medal : C. K. Adamson.

The following have obtained the *Diploma in Architecture :* S. F. Ashby, G. Gneditch, I. H. Horsbrugh, M. Jadhav, W. E. F. Johns, B. B. Learoyd, H. M. Lidbetter, Margaret R. Mathers, B. C. Maynard, L. D. O'Brien, H. W. C. Reyneke van Stuwe, J. Y. T. Stoneham, N. E. Tarbolton, Margaret M. Troup, H. Watson, J. K. Wearing, A. J. Zammit.

The following have obtained the *Certificate in Architecture :* Enid B. Colley, M. C. Harrison, W. H. Lindsay, D. S. Maynard, G. G. Rhodes, J. C. B. Richmond, J. N. Wall.

The following have obtained the *Certificate in Decoration :* Rosemary R. Armstrong, Joan M. Bowring, Helen V. V. Braddell, Elizabeth M. Duncanson, Catherine R. Dyson, Irene Frutiger, J. A. Leather, Gerda Löwenadler (commended), Valerie M. Sinauer.

The following have obtained the *Certificate in Town Planning :* N. E. Block, P. R. Head, A. C. Hopkinson, Helga M. Richards, C. Sanderson, H. G. Speakman.

THE WELSH SCHOOL OF ARCHITECTURE

Exhibition of Architectural Drawings

An exhibition of student work in Architectural Design, Measured Drawings, Working Drawings, etc., was held in the Assembly Hall, at the Technical College, Cardiff, on Tuesday, 13 July. The exhibition was of a somewhat unusual character as it did not consist of selected portions of work done by various students, but of the whole of the work done by one student, Mr. Norman Thomas (son of Mr. Percy Thomas, Past-President), throughout the five-year course leading to exemption from the Final Examination for the Associateship of the R.I.B.A. and to Registration under the Architects' Registration Act.

As Mr. Thomas is a Dawnay Scholar, and as he was also a finalist in two leading competitions, namely, the R.I.B.A. Tite Prize, and the Rome Scholarship, and as included among the drawings was an illustrated thesis written by the student entitled "Domestic Architecture of the Georgian Period in Cardiff," the exhibition proved to be extremely interesting.

From an educational point of view, an exhibition of this character proves to be particularly helpful, showing as it does how one student develops from his work in the first year to the more advanced studies towards the end of his course.

Such an exhibition is also shown to be of great use to intending candidates for the profession, who are enabled to see exactly the sort of thing which will be expected of them should they decide to take up a course of Architectural Education.

THE WELSH SCHOOL OF ARCHITECTURE

Architectural Students' Visit to Italy

A party of about 14 members of the Welsh School of Architecture left Cardiff on Sunday, 18 July, for a vacational tour in Italy of about a fortnight's duration. The places visited included Milan, Florence, Rome and Venice.

With the party were Mr. C. L. Matthew [*A.*], Mr. D. M. Jones, B.Arch. [*A.*], and Mr. Lewis John, M.A., B.Arch. [*A.*], the latter having made the arrangements for the tour and being in charge of the party.

THE POLYTECHNIC SCHOOL OF ARCHITECTURE

EXHIBITION OF STUDENTS' WORKS AT THE BUILDING CENTRE

The Exhibition was opened by the Most Hon. the Marquess of Aberdeen on Monday, 19 July. In the course of his remarks his Lordship commented upon the wide range of subjects studied in the school, including modern building materials, town planning and acoustics, which he considered to be of great importance to the young architect of to-day. He also referred to the important and highly technical problems undertaken as thesis designs, commenting on the topical interest of the subjects chosen and the fact that in every case the buildings were designed to meet the requirements of the site selected.

As a trustee of the Crystal Palace he was particularly interested in a scheme for its reconstruction, and referred to the complexity of the problem. He complimented the student for his vision and courage in attempting a solution.

The town planning schemes for actual areas in the Home Counties received favourable comment, and in particular that for an International Air Port at Langstone which showed exhaustive research into a highly technical problem.

Sir Banister Fletcher, President of the School, who presided, spoke of the long tradition of the School and of several noted architects, now leaders in the profession, who received their early training at the Polytechnic. He stated that whilst the Evening Department of Architecture has been established for many years, the Day School, whose work is now exhibited, has developed more recently into an important fully recognised School of Architecture.

Mr. Darcy Braddell, Chairman of the Board of Architectural Education, spoke of the value of school training and the importance of a properly balanced architectural education, wherein both the academic and the technical subjects received due emphasis.

Notices

EXHIBITION OF DRAWINGS SUBMITTED FOR THE ARCHIBALD DAWNAY SCHOLARSHIPS, 1937

The exhibition of drawings submitted for the Archibald Dawnay Scholarships, 1937, will remain open in the Reception Room of the R.I.B.A. until Friday, 17 September, between the hours of 10 a.m. and 7 p.m.

EXHIBITION OF MODERN SCHOOLS: 12-19 OCTOBER, 1937

Professor John Hilton, M.A., will open an exhibition of Modern Schools in the Reception Room at the Institute on Tuesday, 12 October 1937, at 3 p.m.

All members are cordially invited to the opening and are asked to do everything they can to induce others to visit the exhibition.

The exhibition will be open to the public from :—

4.30 p.m. till 8 p.m., Tuesday, 12 October;
10 a.m. till 8 p.m., Wednesday, 13, Thursday, 14, Friday, 15, Monday, 18, and Tuesday, 19 October;
10 a.m. till 6 p.m., Saturday, 16 October.

CAMERA CLUB DARK ROOM

It has not been possible to find space at the R.I.B.A. for a dark room for the use of members, but the Building Centre has placed a suitable room at the disposal of the Club. This is now being fully equipped with enlargers, developing dishes, etc., and will be available for use of members at any time, including week-ends.

It is proposed to set aside one evening periodically when an experienced member will be present to demonstrate the use of the apparatus, etc.

The annual subscription to the Club is 5s. Will anyone interested communicate with the Hon. Secretary, Miss A. J. Dicker, 8, Gurney Drive, Finchley, N.2?

PROFESSIONAL ADVERTISING

The attention of the Practice Standing Committee has been drawn to the fact that the publishers of certain journals are approaching architects for details of their professional activities, which the publishers propose to embody in the editorial columns of their journals. In the case of one particular firm of publishers, several members forwarded to the Institute the proposed article as drafted by the editor and sent to the architects for any additions or amendments the architects desire. In each case the wording of the articles is identical, with the exception of the names and addresses of the firms of architects to whom they were sent.

The Committee desire to warn members generally against this undesirable form of publicity. The acceptance by members of invitations of this nature from firms of publishers is, in the opinion of the Committee, directly contrary to the Code of Professional Practice and tantamount to advertising.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 4 December 1937 they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 25 September 1937.

LICENTIATES AND THE FELLOWSHIP

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (*b*) and (*cii*), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

SOCIAL ACTIVITIES AT THE R.I.B.A.

Cards containing dates and (as far as possible) particulars of social events at the R.I.B.A. in the session 1937-1938 are being prepared and are expected to be ready in October.

Members wishing to obtain copies are invited to notify the Secretary R.I.B.A. as soon as possible.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

PROPOSED COMPETITION FOR ALTERATIONS AND IMPROVEMENTS TO EBBW VALE CONSERVATIVE CLUB PREMISES

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the Regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition.

BIRMINGHAM BUILDING TRADES EXHIBITION: DESIGN FOR MULTI-STOREY GARAGE

The management of the Birmingham Building Trades Exhibition invite architects to submit in competition designs for a Multi-Storey Garage.

Assessors: Mr. S. N. Cooke [*F.*], President of the Birmingham and Five Counties Architectural Association.
Mr. W. T. Benslyn, A.R.C.A. [*F.*].
Mr. T. M. Ashford [*A.*].

Premiums: £60, £30 and £20.

Last day for submitting designs: 24 September 1937.

Conditions of the competition may be obtained on application to Provincial Exhibitions, Ltd., Athenæum Chambers, 71 Temple Row, Birmingham.

KEIGHLEY: NEW SENIOR MIXED SCHOOL

The Keighley Education Authority invite architects to submit, in competition, designs for a New Senior Mixed School, proposed to be erected on the Guard House Site, Keighley, Yorkshire.

Assessor: Mr. Harold A. Dod, M.A. [*F.*].

Premiums: 150 guineas, 100 guineas, 50 guineas.

Last day for receiving entries: 22 December 1937.

Last day for questions: 4 September 1937.

Conditions of the competition may be obtained on application to E. Ratcliffe, Director of Education, Education Office, Keighley, Yorks. Deposit £2 2s.

KIRKCALDY: NEW MUNICIPAL BUILDINGS

The Royal Burgh of Kirkcaldy invite architects practising in Scotland to submit, in competition, designs for new Municipal Buildings.

Assessor: Mr. Thomas S. Tait [*F.*].

Premiums: £200, £150 and £100.

Last day for submitting designs has been extended to 29 September 1937.

Last day for questions: 21 June 1937.

LIVERPOOL: SERVICE FLATS AND SOCIAL CLUB

The management of the Building Trades Exhibition invite architects to submit in competition designs for bachelor flats combined with a recreation and social club.

Assessors: Mr. B. M. Ward [*F.*], President of the Liverpool Architectural Society.
Mr. Leonard Barnish [*F.*]
Lieut.-Col. Ernest Gee [*F.*].

Premiums: £70, £30 and £20.

Last day for submitting designs: 20 September 1937.

Conditions of the competition may be obtained on application to Provincial Exhibitions, Ltd., Renshaw Hall, Liverpool, 1.

ST. GEORGE'S HOSPITAL: RECONSTRUCTION

The President, Vice-President, Treasurer and Governors of St. George's Hospital invite architects practising in the United Kingdom and Northern Ireland to submit in competition designs for the reconstruction of St. George's Hospital, Hyde Park Corner.

Assessors: Dr. H. V. Lanchester [*F.*].
Mr. T. A. Lodge [*F.*].

Premiums: £500, £300 and £200.

Last day for submitting designs: 10 May 1938.

Last day for questions: 15 November 1937.

Conditions of the competition may be obtained on application to The House Governor, St. George's Hospital, Hyde Park Corner, London, S.W.1. Deposit £2 2s.

SCUNTHORPE: MUNICIPAL AND POLICE BUILDINGS

The Borough Council of Scunthorpe and the County Council of Lincoln, Parts of Lindsey, invite architects of British nationality to submit in competition designs for Municipal Buildings, Courts and Police Buildings to be erected on a site between High Street and Station Road, Scunthorpe.

Assessor: Mr. T. C. Howitt, D.S.O. [*F.*].

Premiums: £500, £250 and £150.

Last day for submitting designs: 19 November 1937.

Last day for questions: 10 September 1937.

Conditions of the competition may be obtained on application to Mr. J. F. Auld, Town Clerk, Scunthorpe. Deposit £2 2s.

FORTHCOMING COMPETITIONS

Other competitions which it is proposed to hold, and the conditions for which are not yet available, are as follows:—

BILLERICAY: NEW COUNCIL OFFICES

Assessor: Mr. A. W. Kenyon [*F.*].

BRIERLEY HILL, STAFFS.: NEW MUNICIPAL BUILDINGS

Assessor: Mr. Verner O. Rees [*F.*].

CHESTER: EXTENSIONS TO CHESTER ROYAL INFIRMARY
Assessor: Mr. Arthur J. Hope [*F.*].

DUNDEE: COLLEGE OF ART
Assessor: Mr. J. R. Leathart [*F.*].

EDMONTON: NEW TOWN HALL BUILDINGS
Assessor: Mr. E. Berry Webber [*A.*].

GLOUCESTER: NEW SWIMMING BATH AND FIRE STATION
Assessor: Mr. C. F. W. Dening, R.W.A. [*F.*].

PRESTWICH: NEW MUNICIPAL BUILDINGS
Assessor: Mr. T. C. Howitt, D.S.O. [*F.*]

REDCAR: DEVELOPMENT OF THE "STRAY"
Assessor: Professor Patrick Abercrombie V.-P.

SOUTH SHIELDS: ASSEMBLY HALL AND LIBRARY
Assessor: Mr. Arthur J. Hope [*F.*].

WREXHAM: NEW TOWN HALL
Assessor: Mr. Herbert J. Rowse [*F.*].

YEOVIL: NEW TOWN HALL
Assessor: Mr. C. Cowles-Voysey [*F.*]

COMPETITION RESULTS

ABERDEEN: LAYOUT OF KINCORTH
1. Messrs. Clifford Holliday [*F.*], Denis Winston [*A.*] and R. J. Gardner-Medwin [*A.*] (London).
2. Miss Ruth Ellis [*A.*] and Mr. L. H. Bucknell [*F.*] (London).
3 and 4. Messrs. Grigori M. Hirsch and M. Pinches (Bucharest); Messrs. Wesley Dougilll [*A.*] and E. A. Ferriby [*A.*] (Liverpool).
Commended: Mr. Donald D. Harrison [*A.*] (Watford). Messrs. G. A. Lyall [*A.*] and H. A. Rendel Gavan (Edinburgh).

BELFAST: WATER COMMISSIONERS' OFFICES
1. Messrs. H. S. Silcock [*A.*] and H. Thearle [*A.*] (Liverpool).
2. Messrs. E. D. Lyons [*A.*], L. Israel [*A.*] and C. H. Elsom [*Student*] (London).
3. Mr. H. T. Wright [*F.*] (Newcastle-upon-Tyne).

GLOUCESTER: NEW SECONDARY SCHOOL FOR BOYS
1. Mr. Donald G. Walton [*A.*] (Maidenhead).
2. Mr. H. T. Wright [*F.*] (Newcastle-upon-Tyne).
3. Mr. W. H. Watkins [*F.*] in association with Mr. F. L. Hannam [*A.*] and A. S. Gray (Bristol).

MEMBERS COLUMN

Owing to limitation of space, notices in this column are restricted to changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and appointments vacant. Members are reminded that a column in the Advertisement Section of the Journal is reserved for the advertisements of members seeking appointments in architects' offices. No charge is made for such insertions and the privilege is confined to members who are definitely unemployed.

CHANGES OF ADDRESS

On and after 4 October 1937 the address of Messrs. Culpin & Son will be 21 Ebury Street, Grosvenor Gardens, S.W.1. Telephone No. Sloane 5207 (2 lines).

Mr. Donald G. Walton [*A.*] will be, until further notice, at King Street Chambers, Maidenhead, Berks, Telephone No. Maidenhead 1957, where he is opening a practice on his own account.

Mr. Ronald J. Wilson [*A.*] has gone to Ronald John Wilson School of Architecture, Gordon Institute of Technology, Geelong, Victoria, Australia.

Mr. J. W. Denington [*L.*] has removed from 12 Lismore Road, South Croydon, to 20 Handel Mansions, Handel Street, Brunswick Square, W.C.1.

TRADE CATALOGUES WANTED

Frank Brown [*L.*], 20 Pocklingtons Walk, Leicester, has taken into partnership A. L. Sharpe [*A.*]. The practice is being carried on in the joint names of Frank Brown and A. L. Sharpe [*L. & A.*] at Crown Buildings, 4 Loseby Lane, Leicester, to which address all communications should be forwarded.

Latest trade catalogues will be acceptable.

Captain C. M. Boys Hinderer [*F.*] has left Mombasa and gone to Tanganyika. He would be glad to receive trade catalogues at P.O. Box 482, Dar es Salaam, Tanganyika.

PRACTICES FOR SALE

Architect's practice for sale in progressive town in North of England. Full particulars supplied.—Box 3087, c/o Secretary R.I.B.A.

An old-established practice for sale on the S.E. Coast. Schemes estimated at £20,000 now prepared ready for commencement. Personal and domestic circumstances are the reasons for disposal.—Write in confidence to Box 2587, c/o Secretary R.I.B.A.

PARTNERSHIPS WANTED

A.R.I.B.A. (25) desires post with a view to partnership, preferably within 40 miles of London. Capital available. Two years with present employer as chief assistant on all classes of work. Six years' school training with distinction. Premiated in recent open competition.—Box 4937, c/o Secretary R.I.B.A.

Architect [*L.*], with wide experience, London, Paris, New York, at present engaged in private practice, desires to enter into partnership with an established architect, town or country.—Box 3937, c/o Secretary R.I.B.A.

A.R.I.B.A. (25) desires salaried post with well-established London architect with view to future partnership: 6 years' first-class general and competition office experience, and 2 years' A.A. School training (honours diploma); premiated in open competition, 1936; R.I.B.A. prize-winner, 1937; disengaged in October; commencing salary £5 per week; highest references; capital available.—Write Box 3837, c/o Secretary R.I.B.A.

A.R.I.B.A., with previous experience as a practising architect, seeks partnership or post leading to eventual partnership in an established provincial practice or overseas, preferably South Africa. Some capital available.—Apply Box 5937, c/o Secretary R.I.B.A.

NEW ADDRESS

Mr. W. H. Watkins [*F.*], chartered architect, now has an additional address at Trafalgar House, 11 Waterloo Place, S.W.1. Tel.: Whitehall 5963.

NEW TITLE OF FIRM

Colin R. Crickmay [*A.*] and Hugh W. Crickmay [*A.*], who have been practising until recently as Crickmay and Crickmay at 22 Mackenzie Street, Slough, have taken over the practice of Crickmay & Sons at Weymouth, and are now practising under this name from 50 St. Mary Street, Weymouth. Telephone No. Weymouth 113.

PRACTICE BOUGHT

MR. HAYDN M. R. BURGESS [*A.*] has purchased the practice of Messrs. A. O. Evans & Evans, Court Chambers, The Arcade, Pontypridd, and will continue to practise at his present address, 9 Market Street, Pontypridd.

NEW PARTNER

MESSRS. TATCHELL & WILSON [*FF.*], of Bank Chambers, 32 Strand W.C.2, have taken into partnership Mr. Rodney Fleetwood Tatchell B.A. Hons.(Lond.) [*A.*].

OFFICE ACCOMMODATION TO LET

Two furnished ground floor offices to be let near Trafalgar Square, for professional use, including light, heat and cleaning. Reply to Box 2487, c/o Secretary R.I.B.A.

DISSOLUTION OF PARTNERSHIP

THE partnership between Mr. Edgar Archer [*F.*] and Mr. J. M. Aylwin [*A.*] has been dissolved. Mr. Archer will continue the practice under the same title of Meakin, Archer & Co. at 135 Queen Victoria Street, E.C.4, and Mr. Aylwin will practise on his own account at 7 Park Lane, W.1.

CONTINUATION OF ARCHITECTURAL TUITION PRACTICE

MR. C. W. BOX [*A.*] has taken on the architectural tuition practice of the late Mr. A. G. Bond [*F.*] at 115 Gower Street, W.C.1. Telephone : Euston 3906.

ASSISTANCE OFFERED

ARCHITECT [*F.*] is open to render assistance on jobs or competitions in own office or otherwise.—Apply N., 14 Bedford Row, W.C.1.

ASSOCIATE in private practice, London and Hampshire, will undertake part time assistance, preferably in own office, or supervision work.—T., Room 2, 38-40 Eccleston Square, S.W.1.

PERIODICALS FOR DISPOSAL

To Architects, Builders, Engineers, etc., a large quantity of periodicals of various kinds *free except carriage*. Lists supplied.—Apply Box 3187, c/o Secretary R.I.B.A.

R.I.B.A. EXAMINATIONS, JUNE AND JULY 1937

The questions set at the Intermediate, Final and Special Final Examinations held in June and July 1937 have been published and are on sale at the Royal Institute, price 1s. (exclusive of postage).

Architects' and Surveyors' Approved Society

ARCHITECTS' ASSISTANTS' INSURANCE FOR THE NATIONAL HEALTH AND PENSIONS ACTS

Architects' Assistants are advised to apply for the prospectus of the Architects' and Surveyors' Approved Society, which may be obtained from the Secretary of the Society, 113 High Holborn, London. W.C.1.

The Society deals with questions of insurability for the National Health and Pensions Acts (for England) under which, in general, those employed at remuneration not exceeding £250 per annum are compulsorily insurable.

In addition to the usual sickness, disablement and maternity benefits, the Society makes grants towards the cost of dental or optical treatment (including provision of spectacles).

No membership fee is payable beyond the normal Health and Pensions Insurance contribution.

The R.I.B.A. has representatives on the Committee of Management, and insured Assistants joining the Society can rely on prompt and sympathetic settlement of claims.

A.B.S. Insurance Department

THE ARCHITECTS' SPECIAL MOTOR CAR INSURANCE AT LLOYD'S

In conjunction with a firm of Lloyd's Insurance Brokers the Architects' Benevolent Society's Insurance Committee have devised a Special Motor Car Policy for Architects. This policy and the special advantages to be gained from it are available only to members of the Royal Institute of British Architects and its Allied and Associated Societies.

Special features include :—

1. Agreed values for all cars payable at any time in the event of a total loss.

2. A cumulative no-claim bonus from 20 per cent., rising to 33⅓ per cent. in the third year.

3. No extra premium for business use of car owned by individuals.

4. Prompt claims service in every part of Great Britain ; repairs carried out by any garage provided estimate is forwarded immediately.

SPECIMEN RATES FOR FULL COMPREHENSIVE POLICIES ARE GIVEN BELOW. OTHER RATES QUOTED ON APPLICATION

	Premium. £ s. d.
7 h.p. Austin, valued at £100	8 5 0
9 h.p. Standard, valued at £100	9 0 0
11 h.p. Morris, valued at £150	9 15 0
20 h.p. Hillman, valued at £300	13 7 0

(The rates shown do not apply to cars garaged in London and Glasgow and Lancashire manufacturing towns ; rates for these areas will be quoted on application.)

All enquiries with regard to the Special Motor Car Policy for Architects should be sent to the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions of Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A. and crossed.

Members wishing to contribute notices or correspondence must send them addressed to the Editor not later than the Tuesday prior to the date of publication.

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